

FIG 28

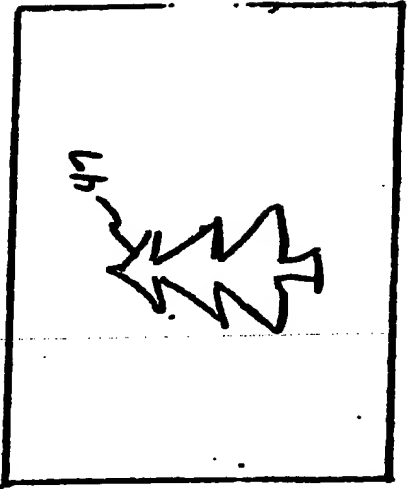


FIG 2A

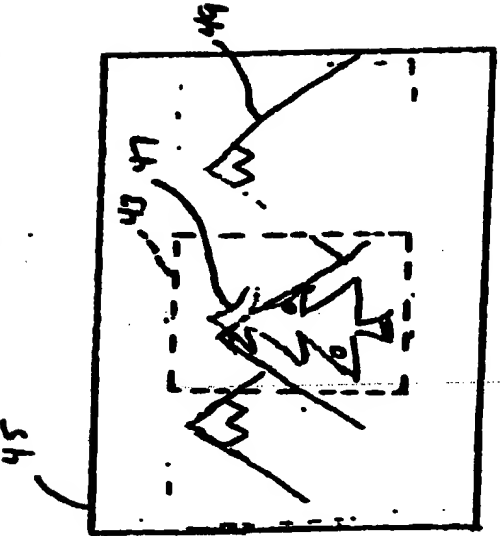
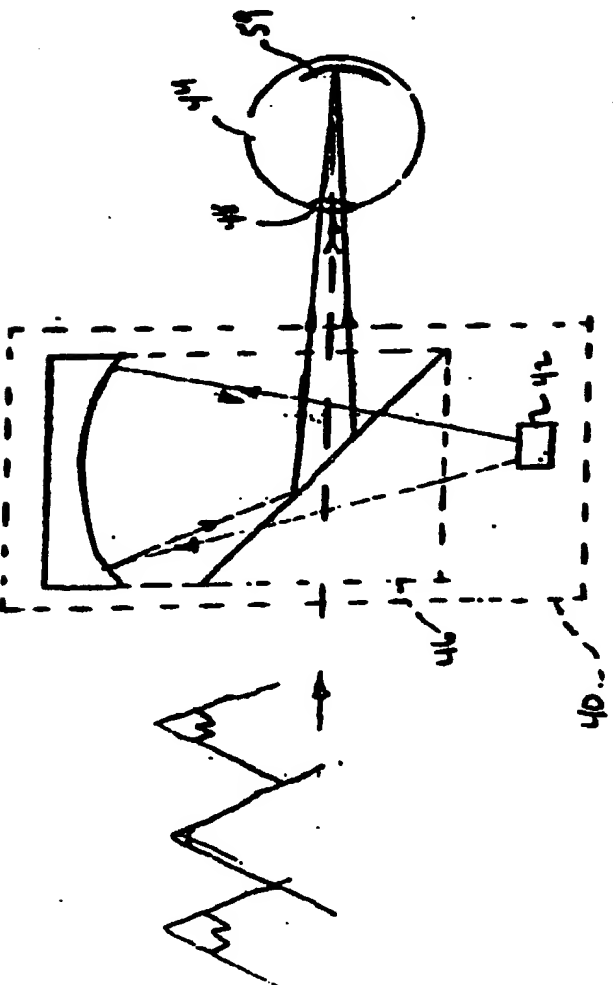
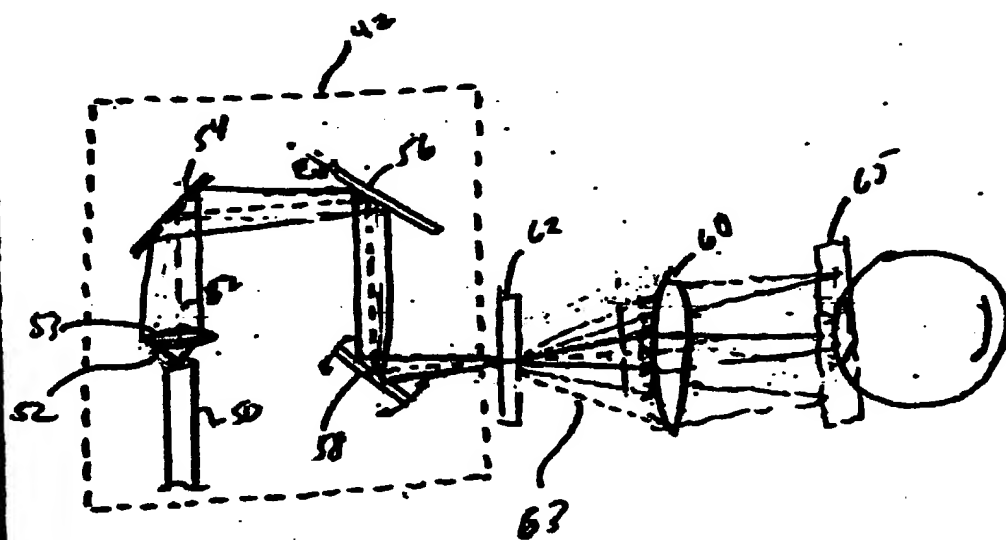


FIG 1





09400350-092099

BEST AVAILABLE COPY

A

B

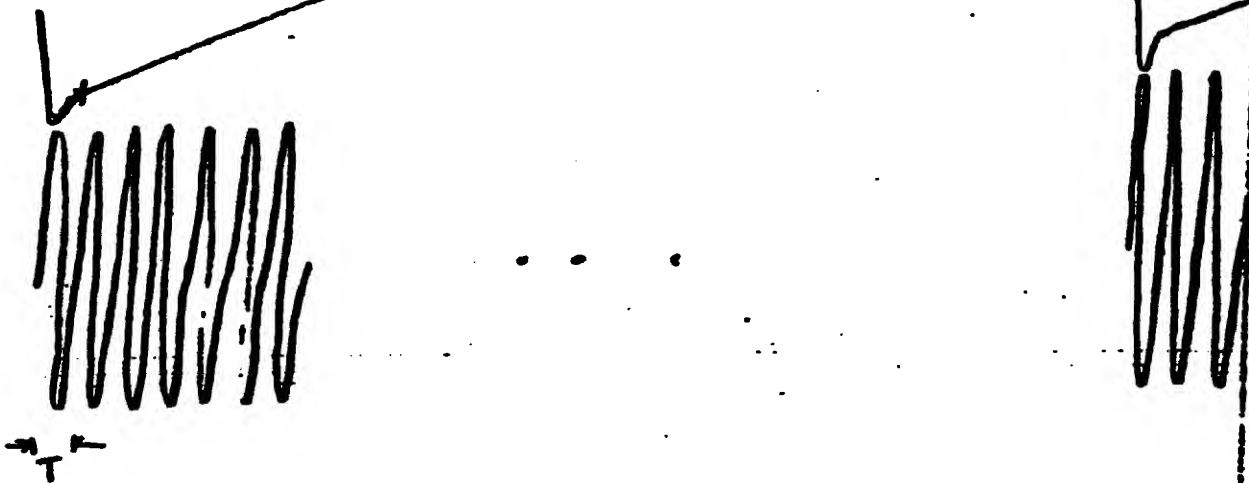


Fig. 4.

660260-0500160

660260-05200460

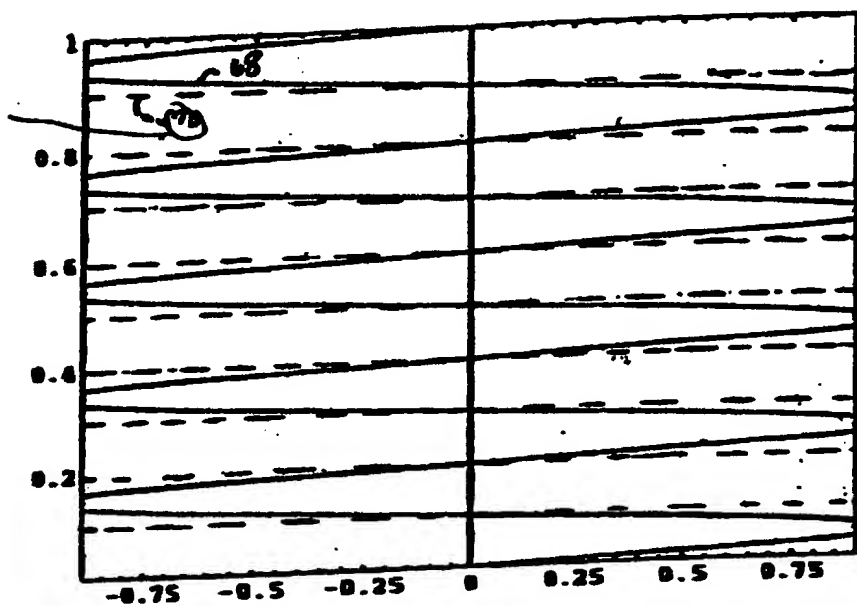


FIG 5

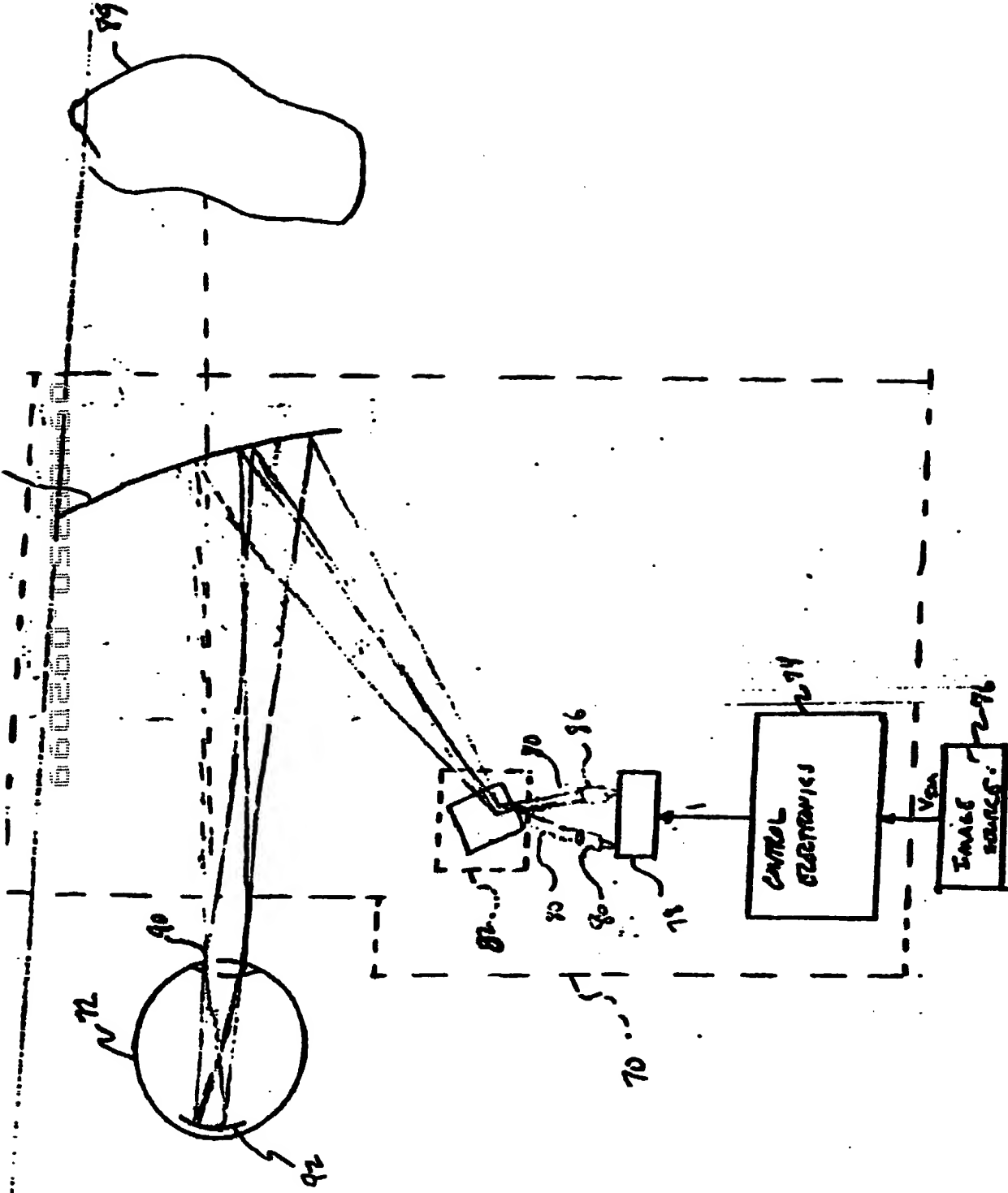


FIG 6

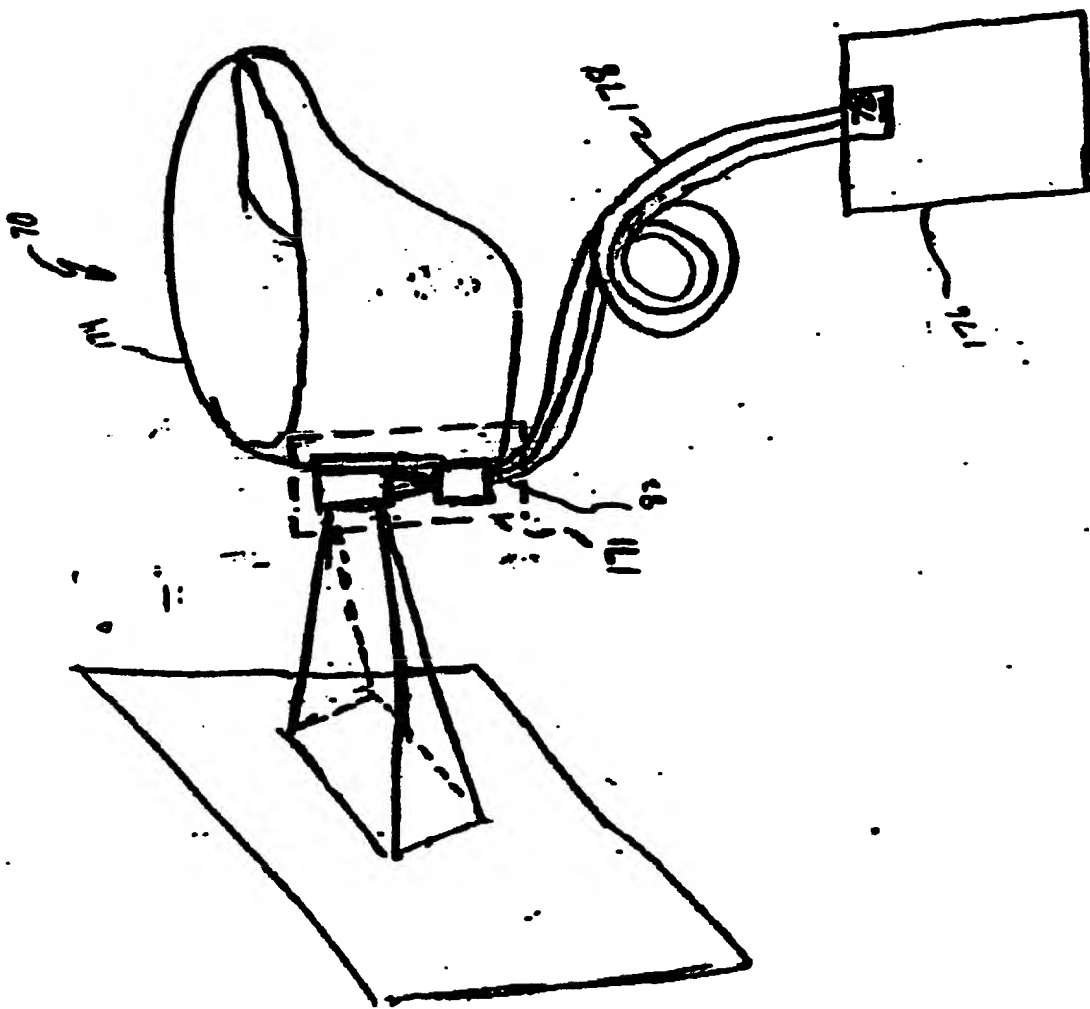


FIG. 7

0000000500460

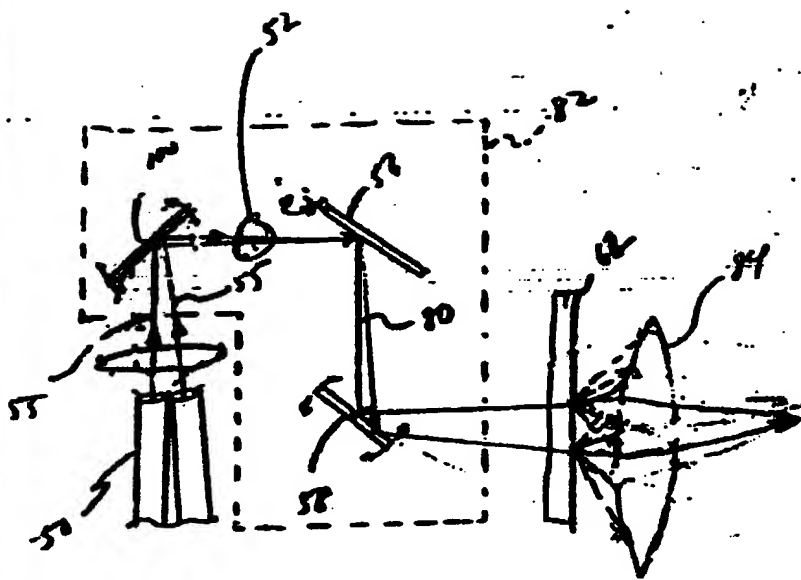


FIG. 8

FIG 9



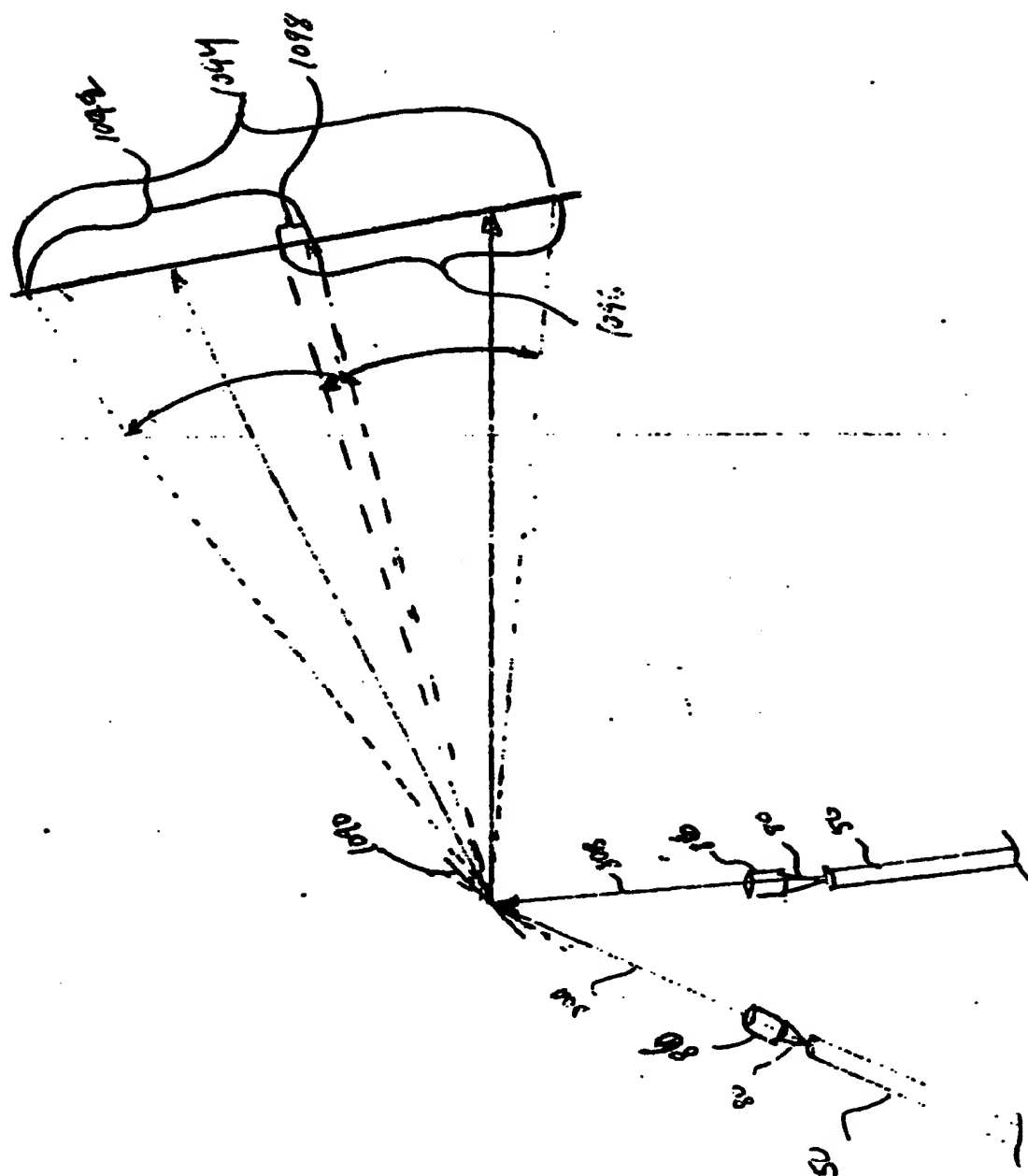


FIG 10

660260-0500460

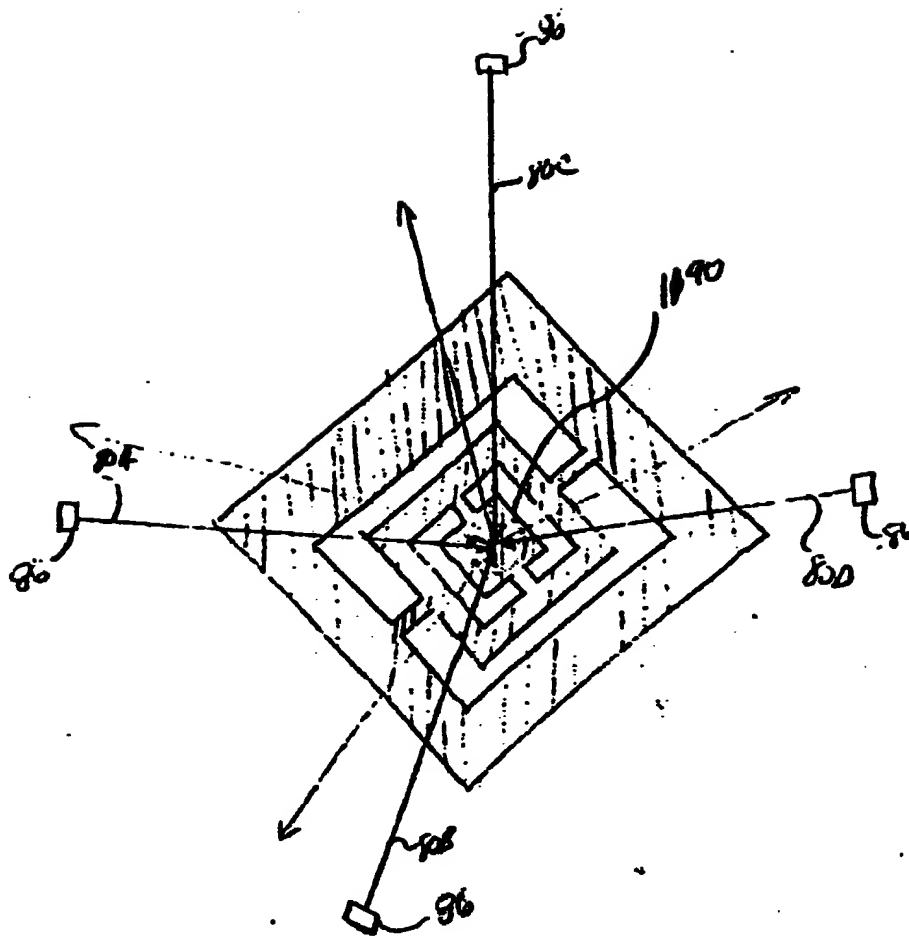


FIG. 11

cross-section

140

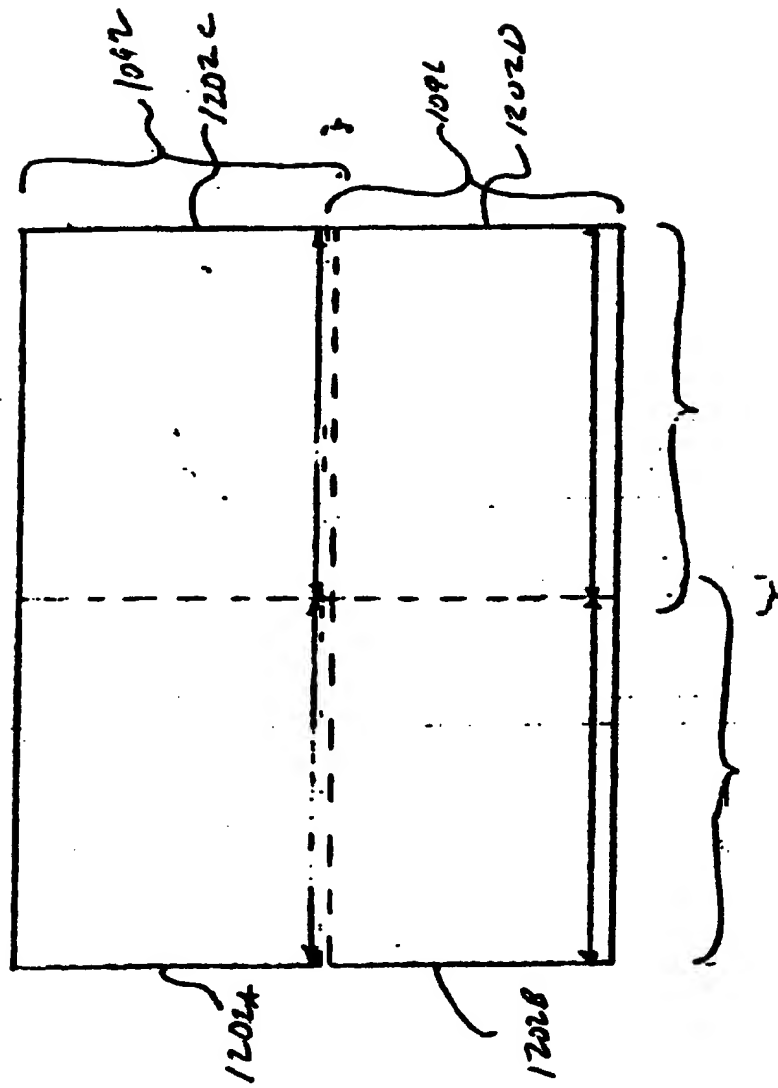


FIG. 12

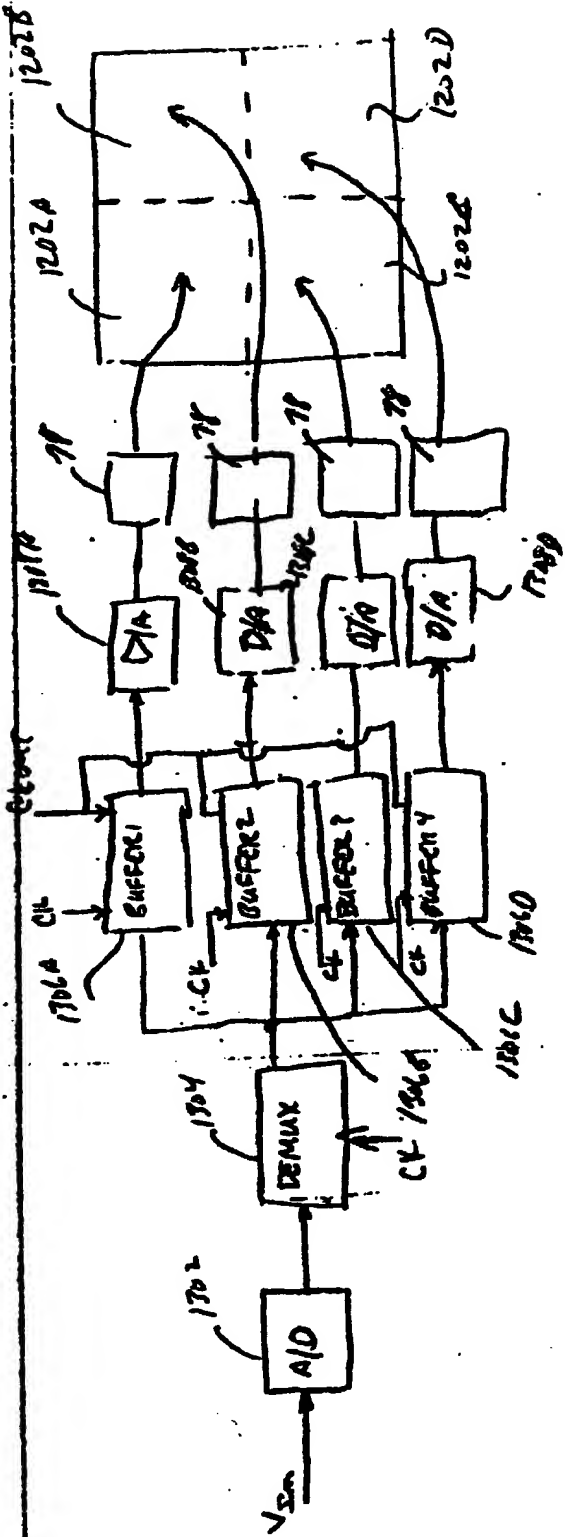
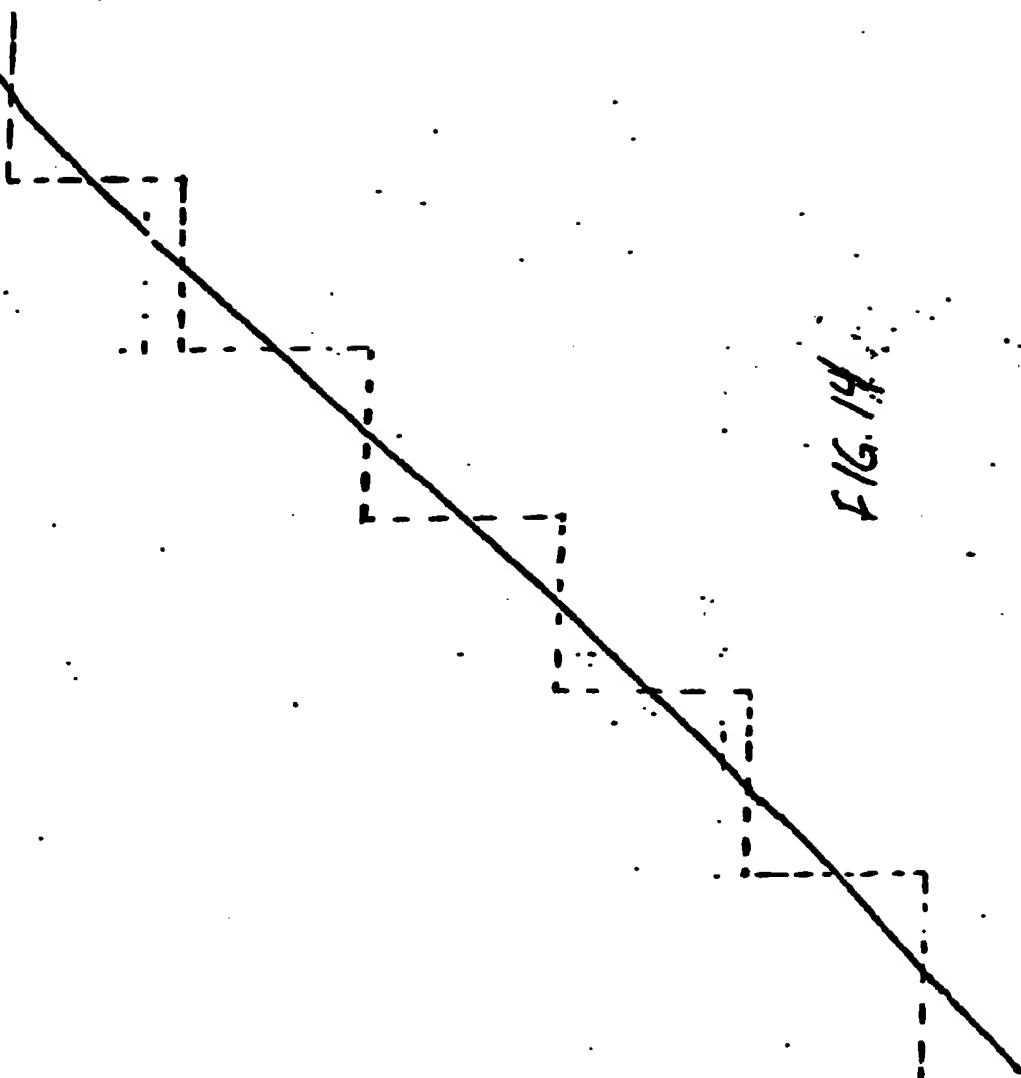


FIG 13

0540320 0520049

11.915



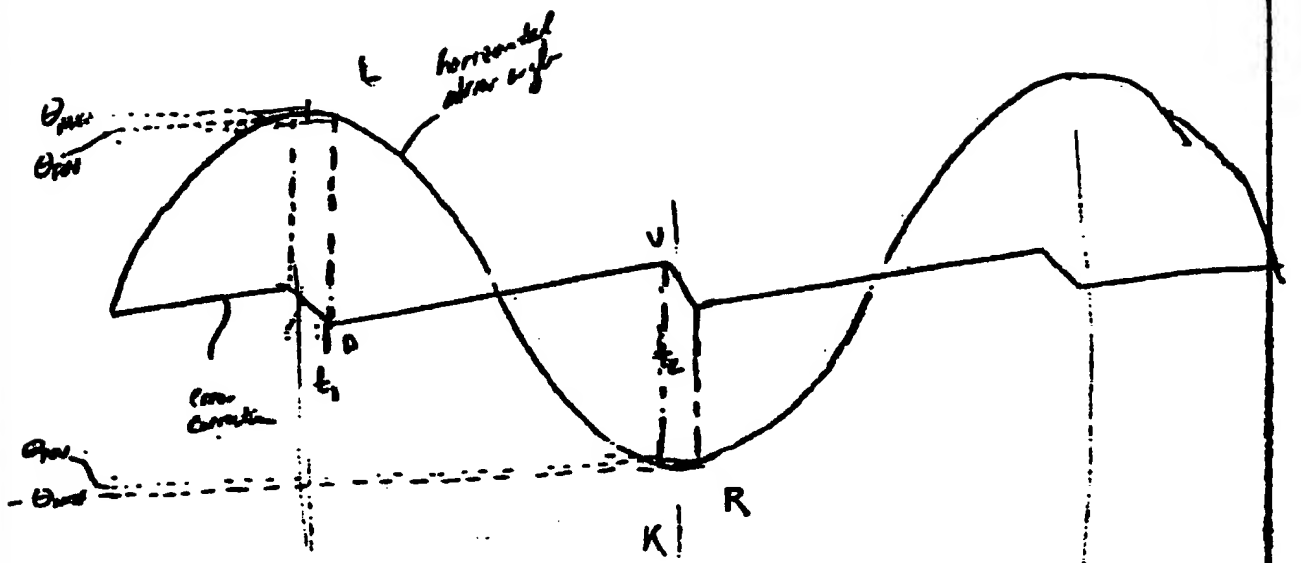


FIG 15

660260-03E00460

600260-05200460

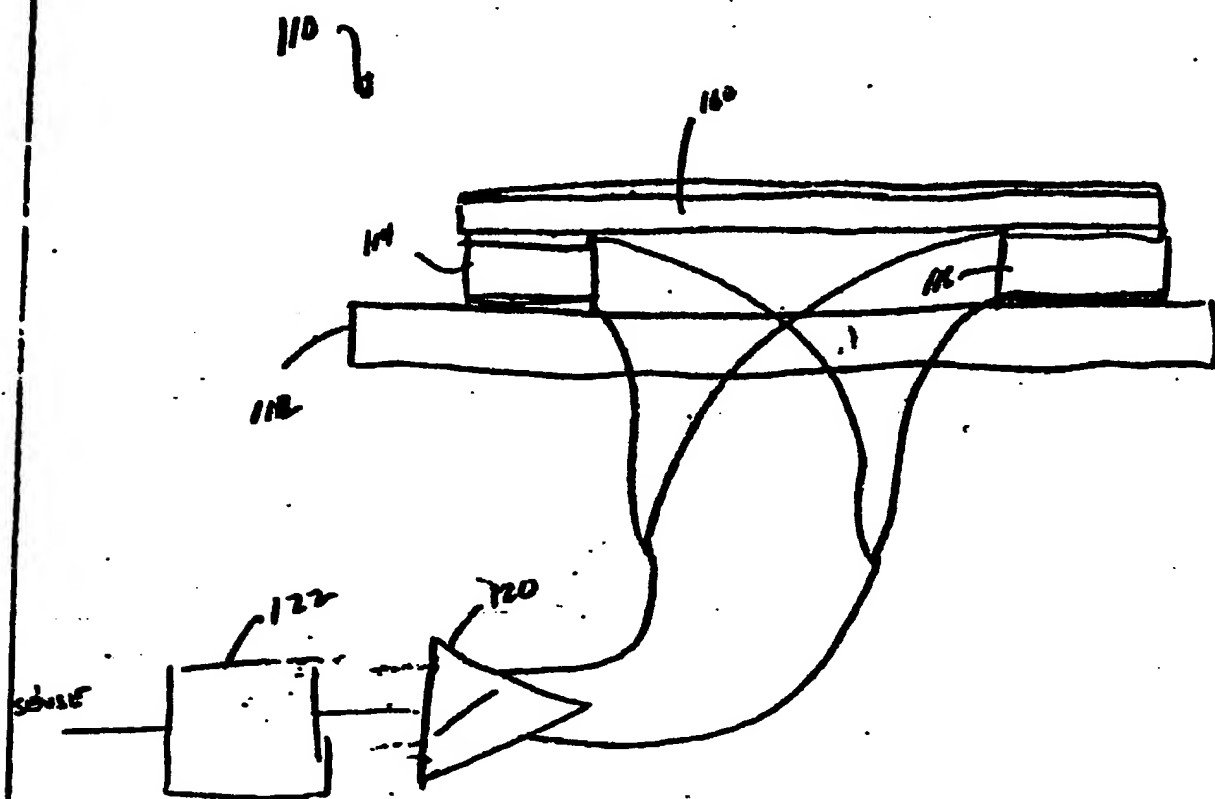


FIG 1.6

660260-05E0460

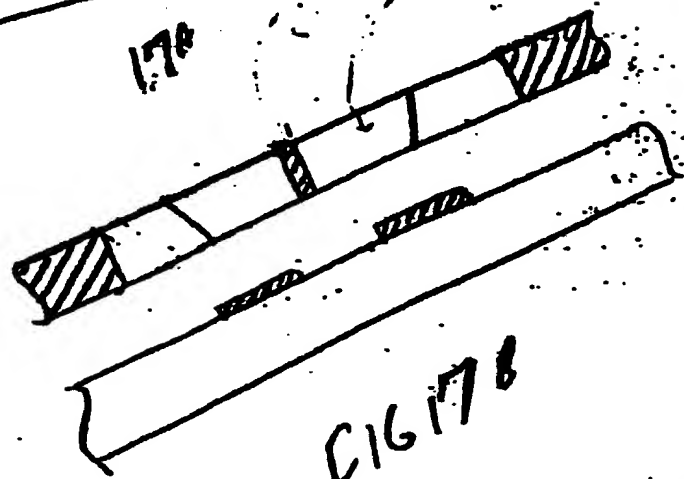
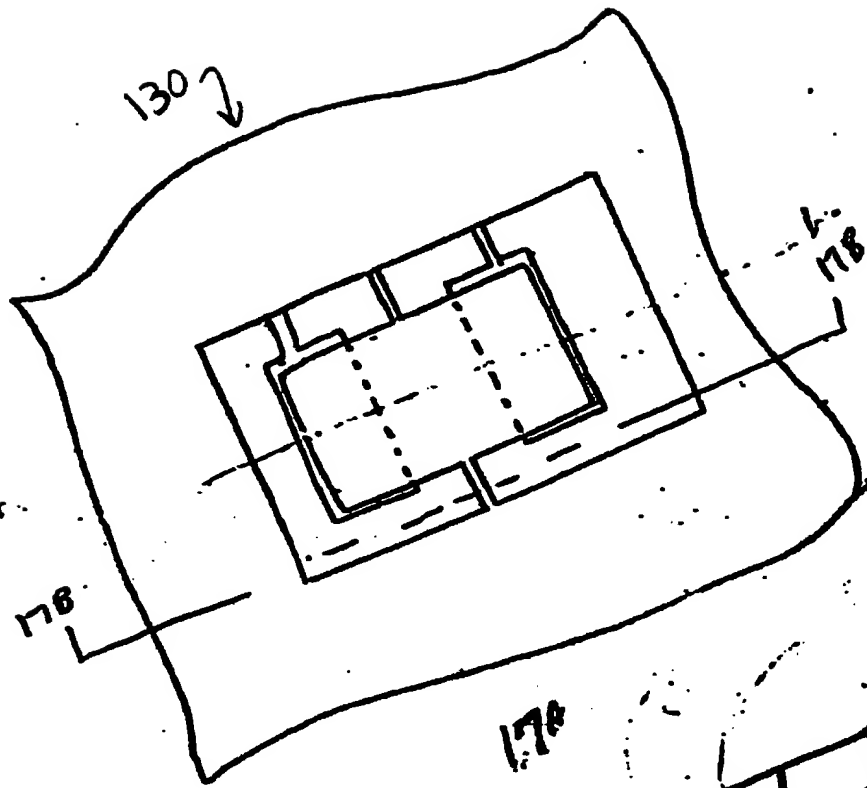
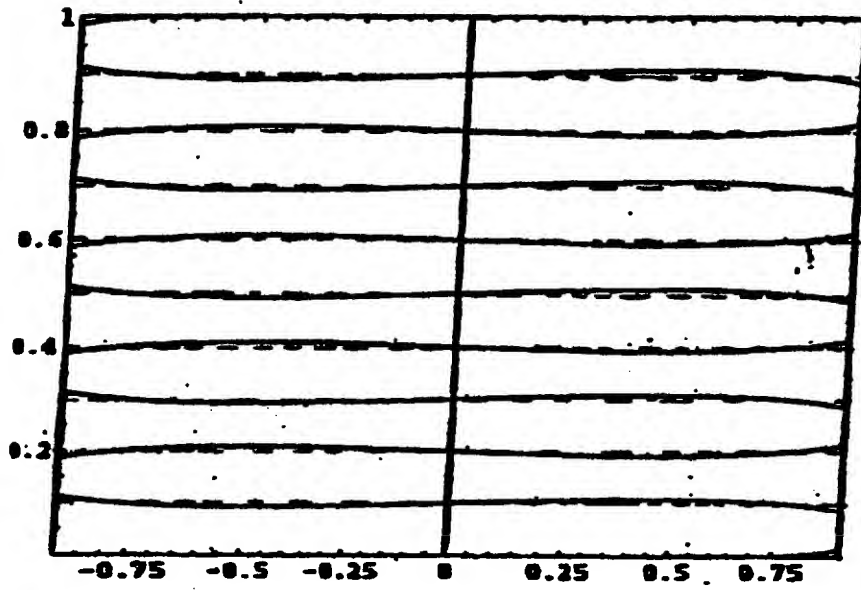


FIG 178





**FIG 18:**

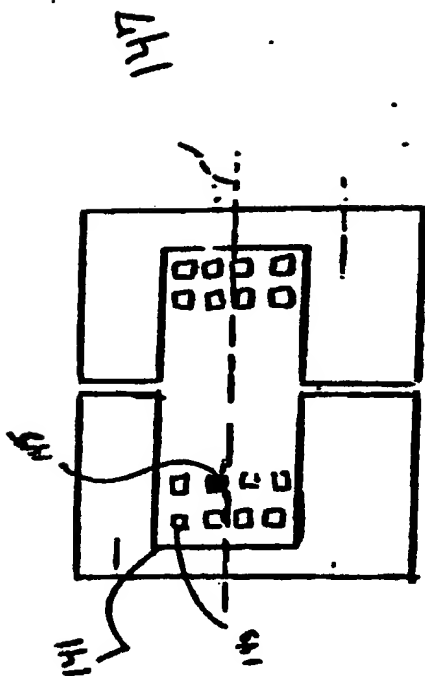


FIG 20

FIG 19

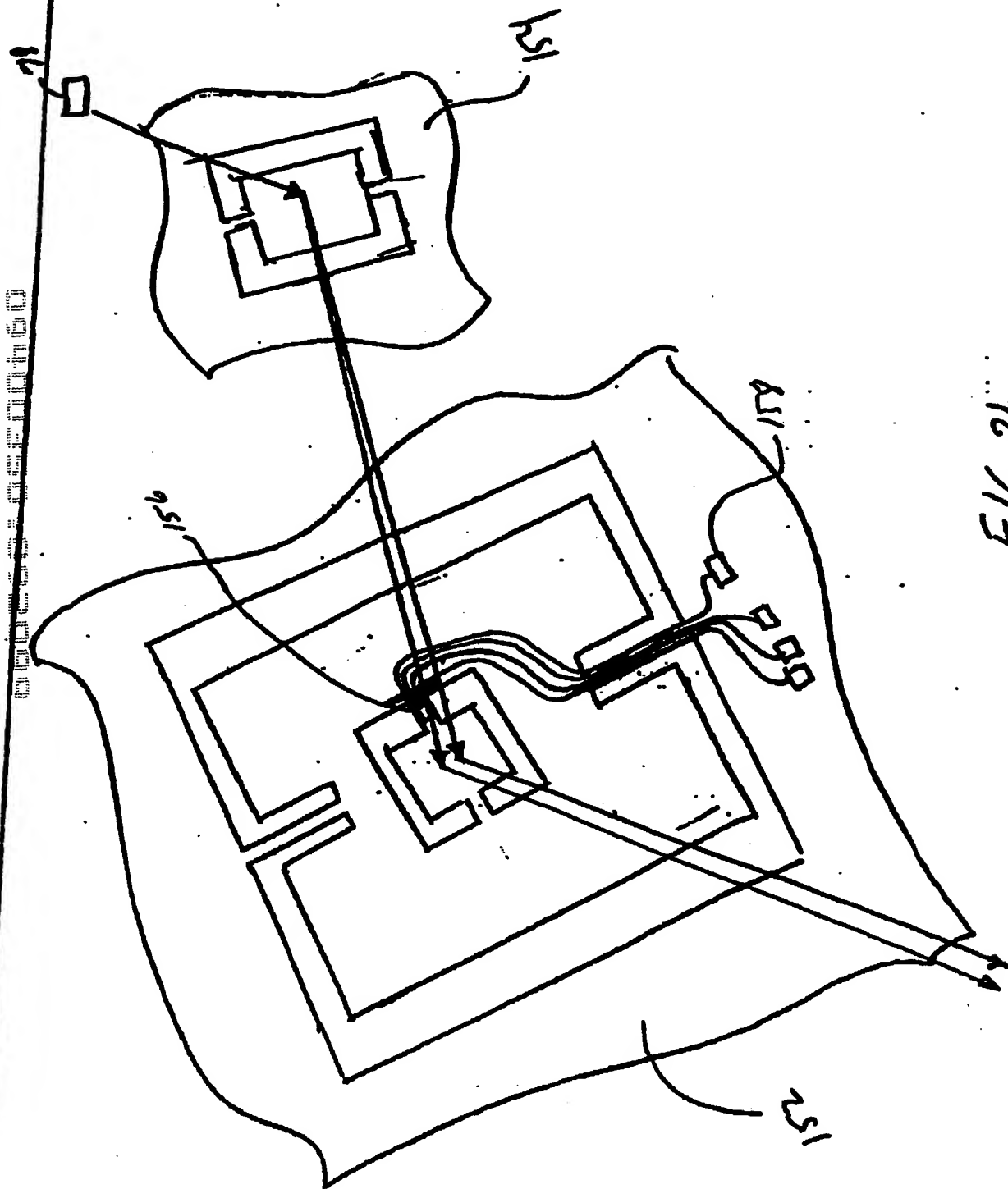
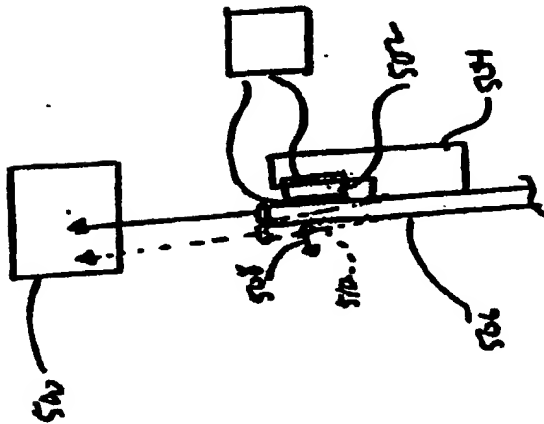
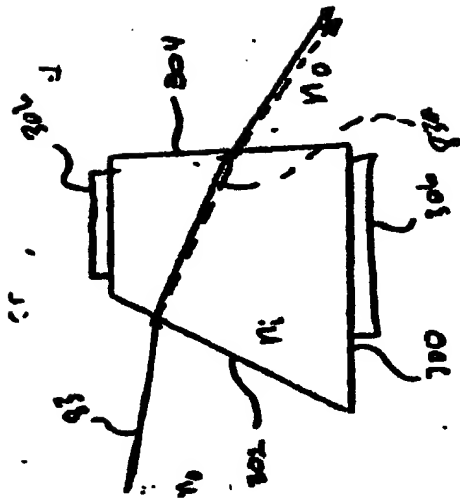


FIG. 21

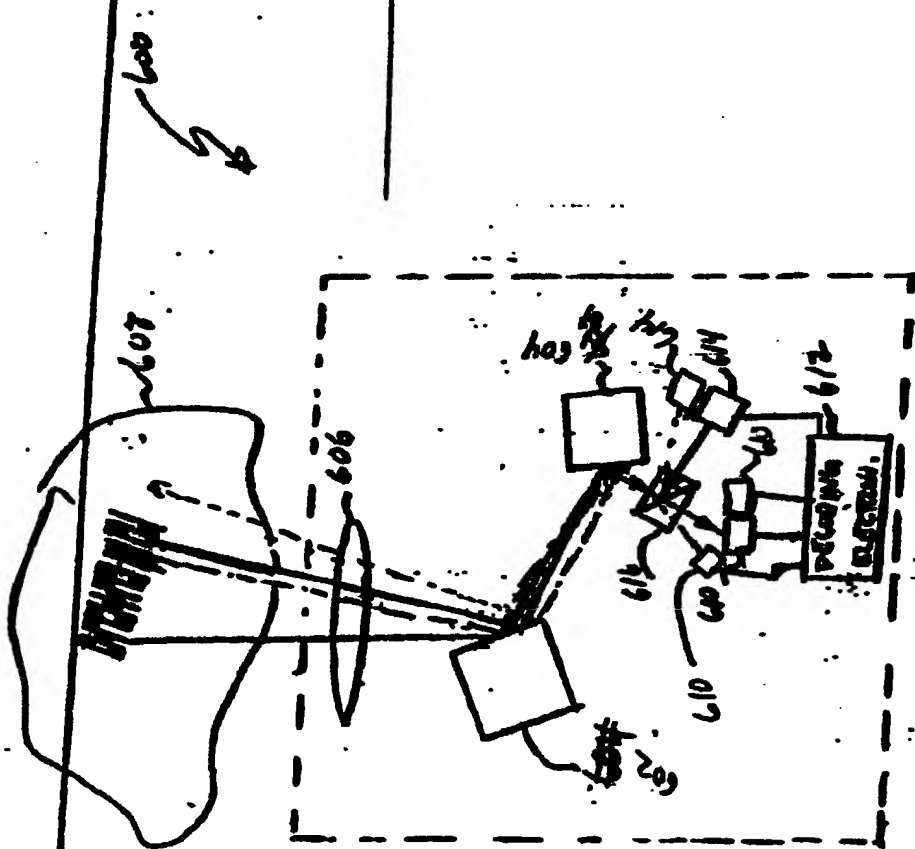


F16,22



F1623

**U.S. DEPARTMENT OF AGRICULTURE**



F16.23

817

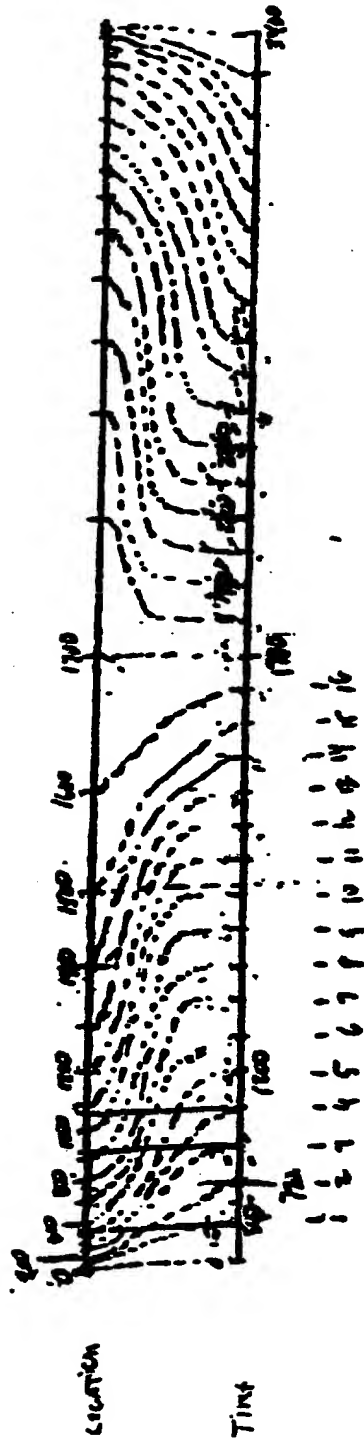


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# SCANNED SECTION



F1626



F1627

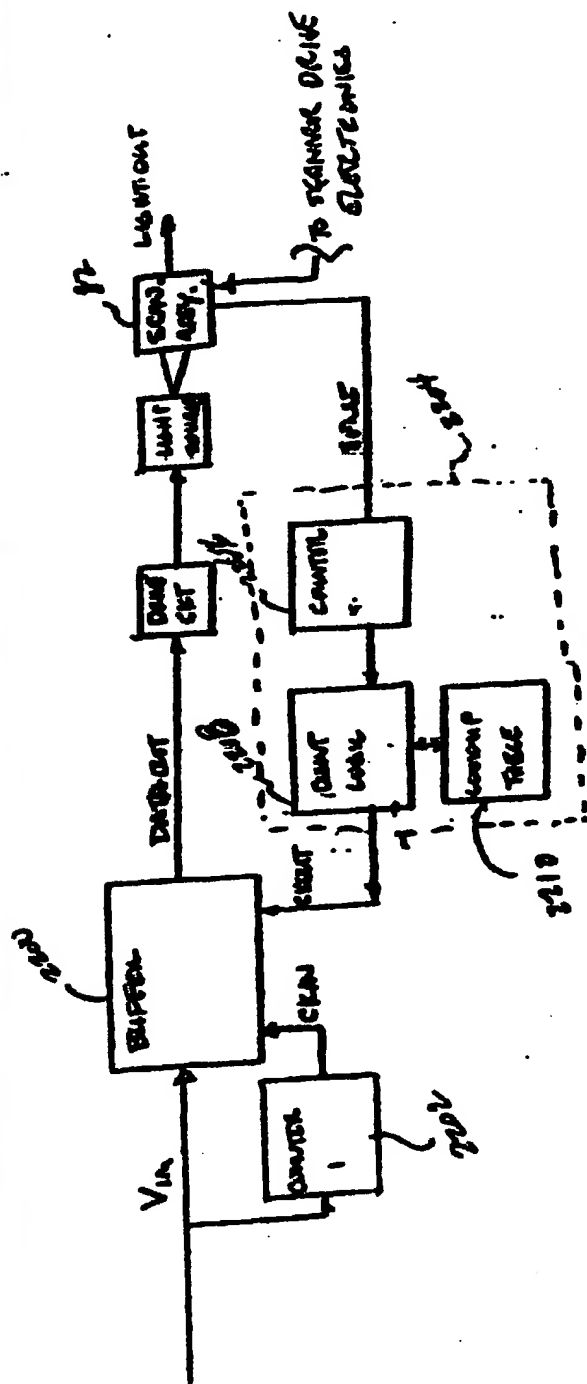
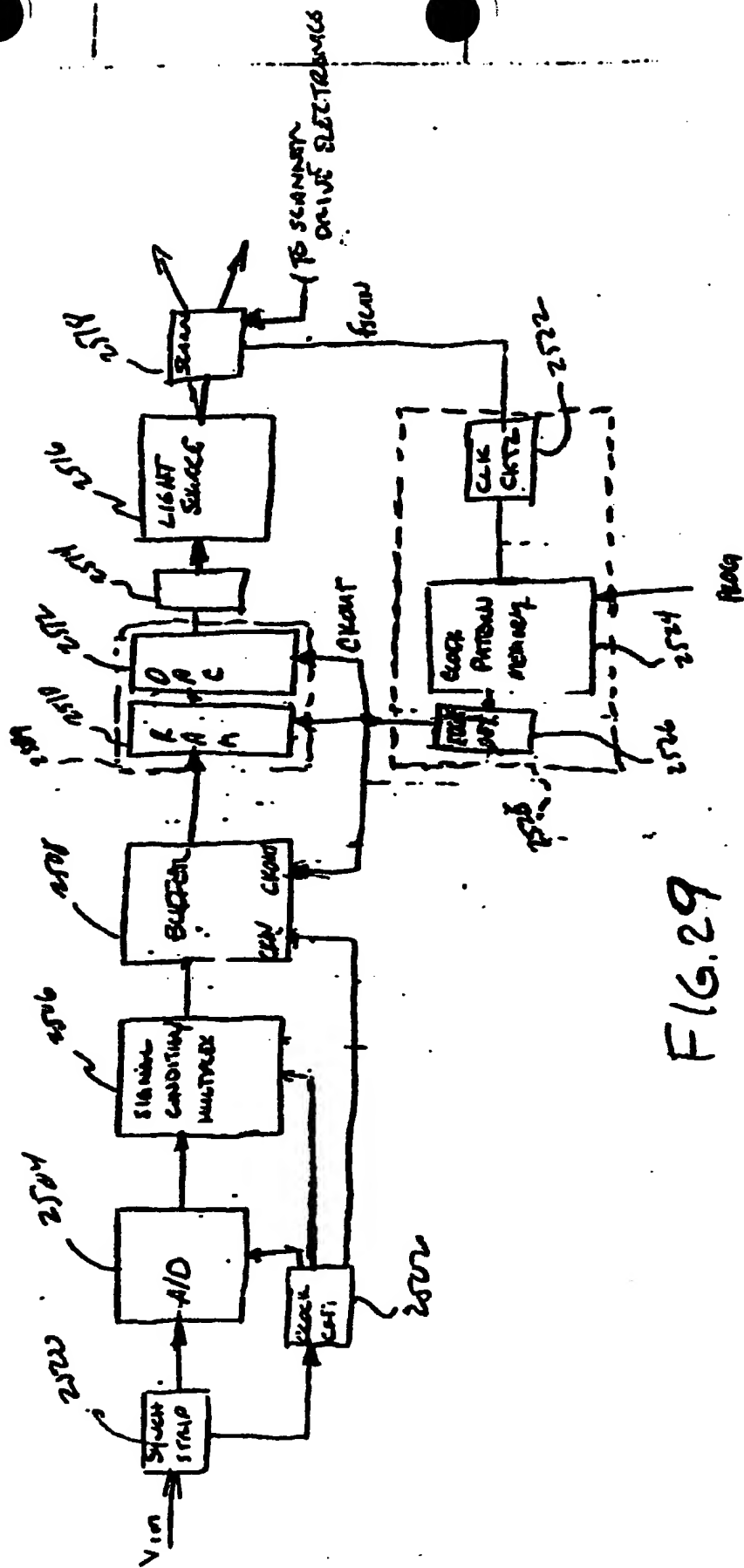


FIG 28





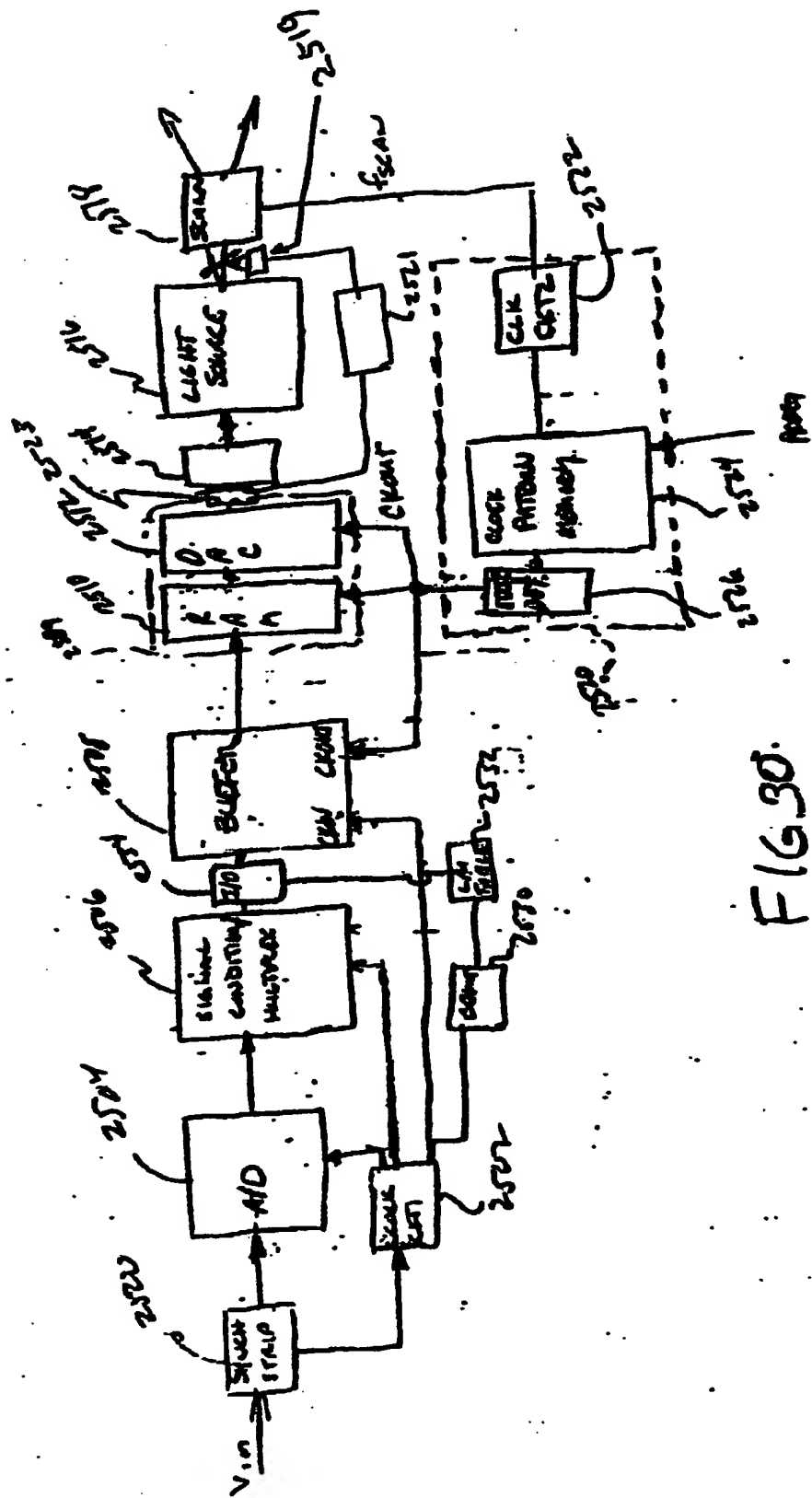


FIG. 30.



00000000000000000000

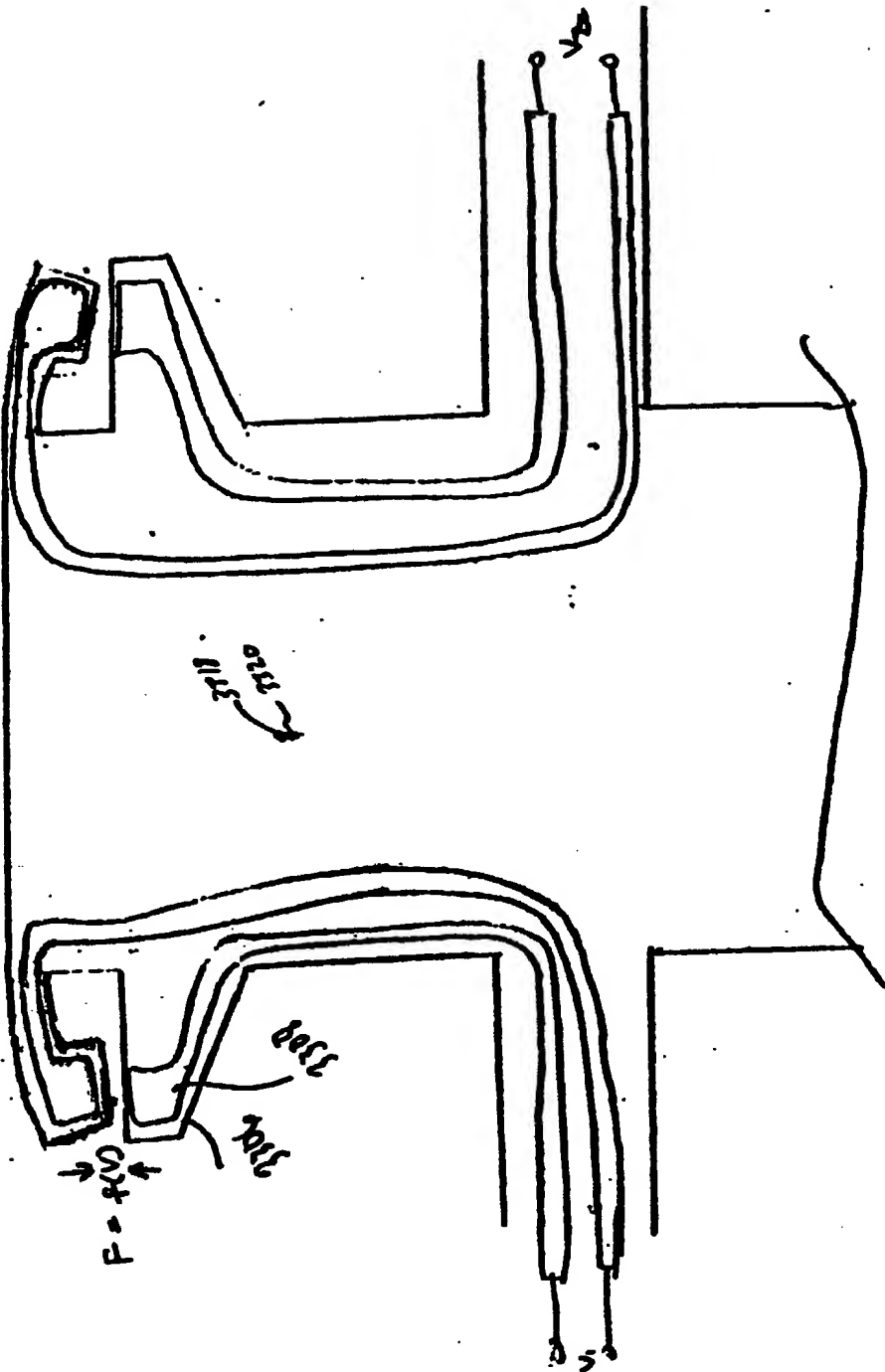
Handwritten annotations:  $2022$  (pointing to the first column),  $2022$  (pointing to the second column),  $2022$  (pointing to the last column).

|          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| $B_{10}$ | $B_{11}$ | $B_{12}$ | $B_{13}$ | $B_{14}$ | $B_{15}$ | $B_{16}$ | $B_{17}$ | $B_{18}$ | $B_{19}$ | $B_{20}$ | $B_{21}$ | $B_{22}$ | $B_{23}$ | $B_{24}$ | $B_{25}$ | $B_{26}$ | $B_{27}$ | $B_{28}$ | $B_{29}$ | $B_{30}$ |
| $B_{10}$ | $B_{11}$ | $B_{12}$ | $B_{13}$ | $B_{14}$ | $B_{15}$ | $B_{16}$ | $B_{17}$ | $B_{18}$ | $B_{19}$ | $B_{20}$ | $B_{21}$ | $B_{22}$ | $B_{23}$ | $B_{24}$ | $B_{25}$ | $B_{26}$ | $B_{27}$ | $B_{28}$ | $B_{29}$ | $B_{30}$ |
| $B_{10}$ | $B_{11}$ | $B_{12}$ | $B_{13}$ | $B_{14}$ | $B_{15}$ | $B_{16}$ | $B_{17}$ | $B_{18}$ | $B_{19}$ | $B_{20}$ | $B_{21}$ | $B_{22}$ | $B_{23}$ | $B_{24}$ | $B_{25}$ | $B_{26}$ | $B_{27}$ | $B_{28}$ | $B_{29}$ | $B_{30}$ |

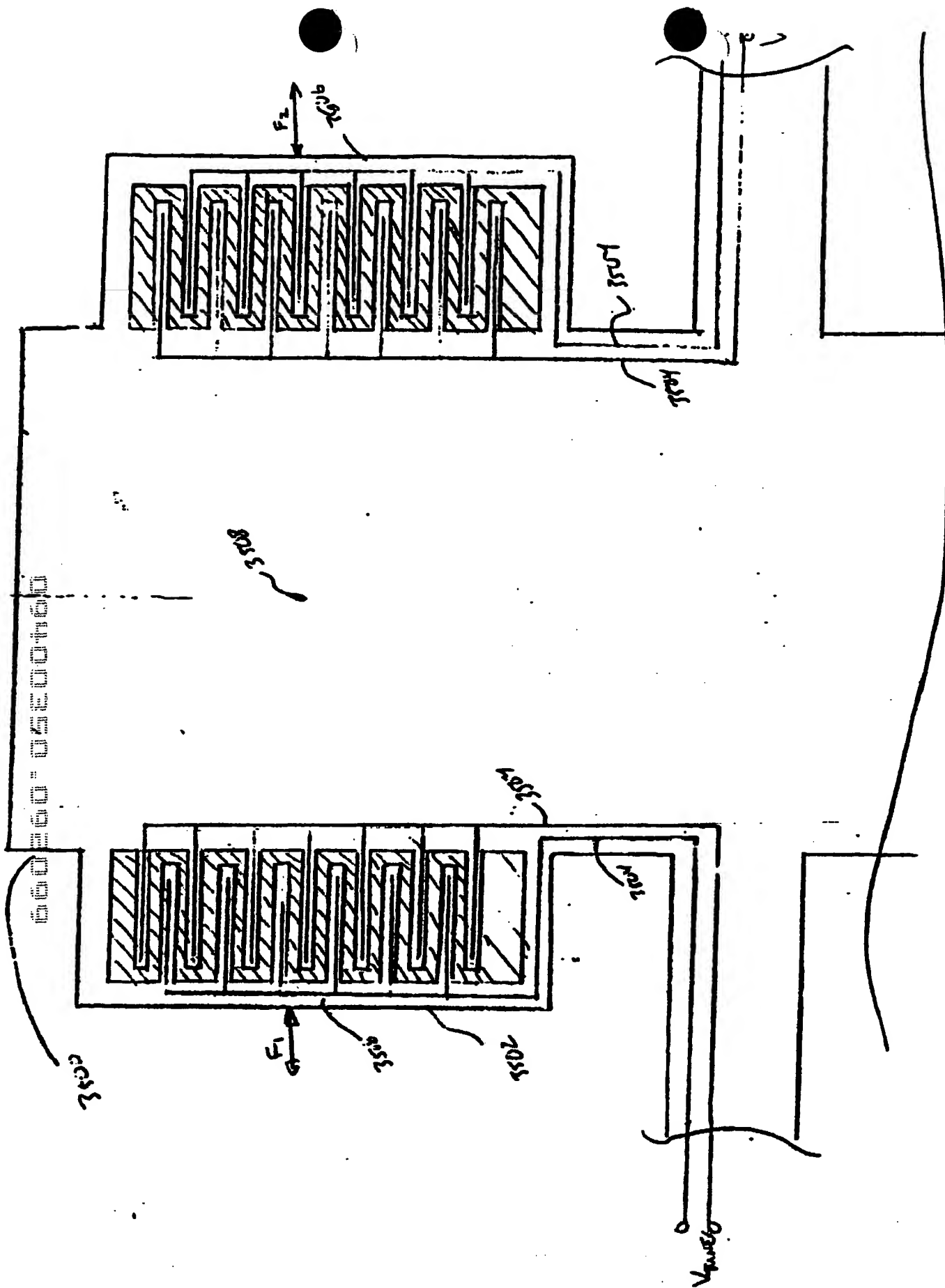
F16.32



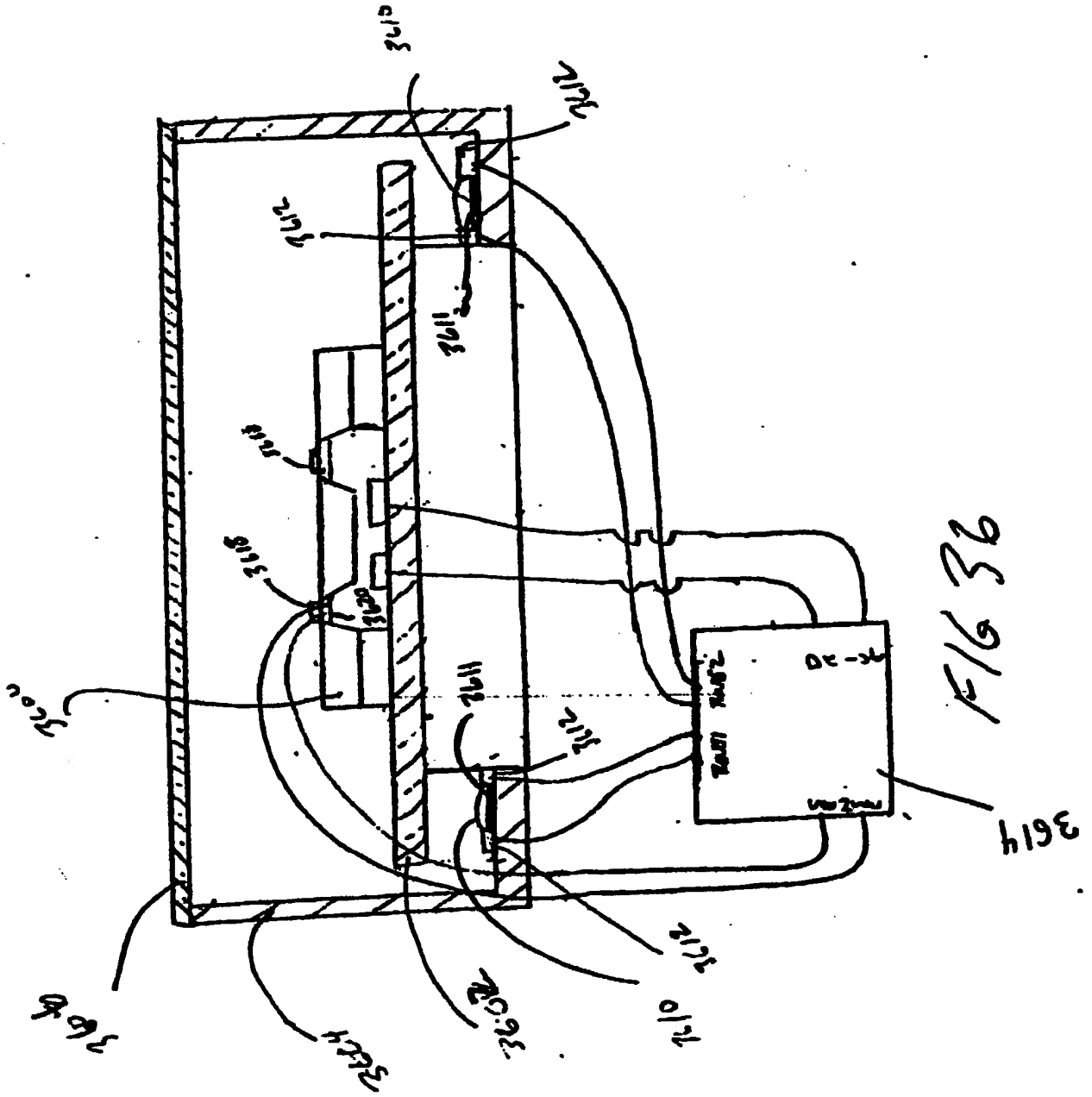
66260-0500460



F16 34



F/G 35





660280 05E00460

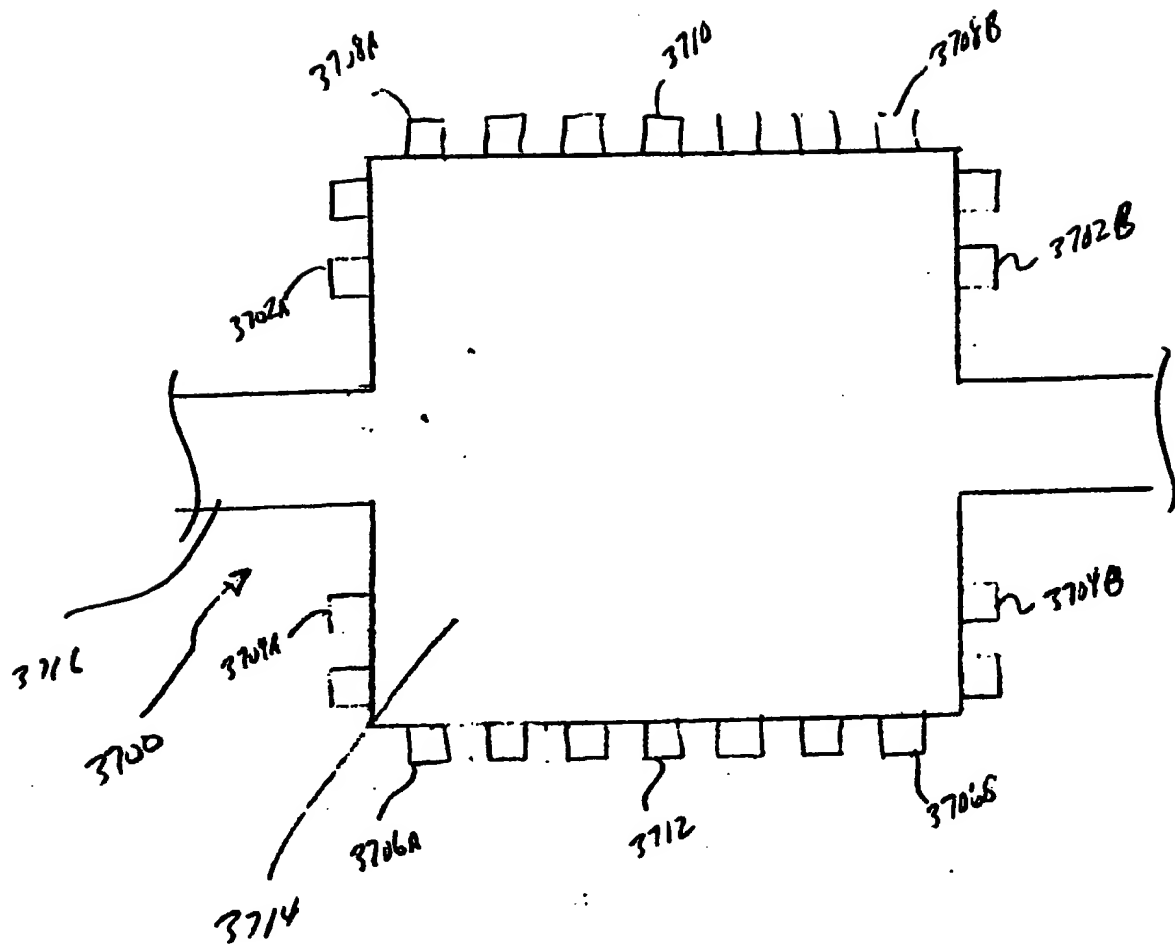


FIG 37



660200-0200400

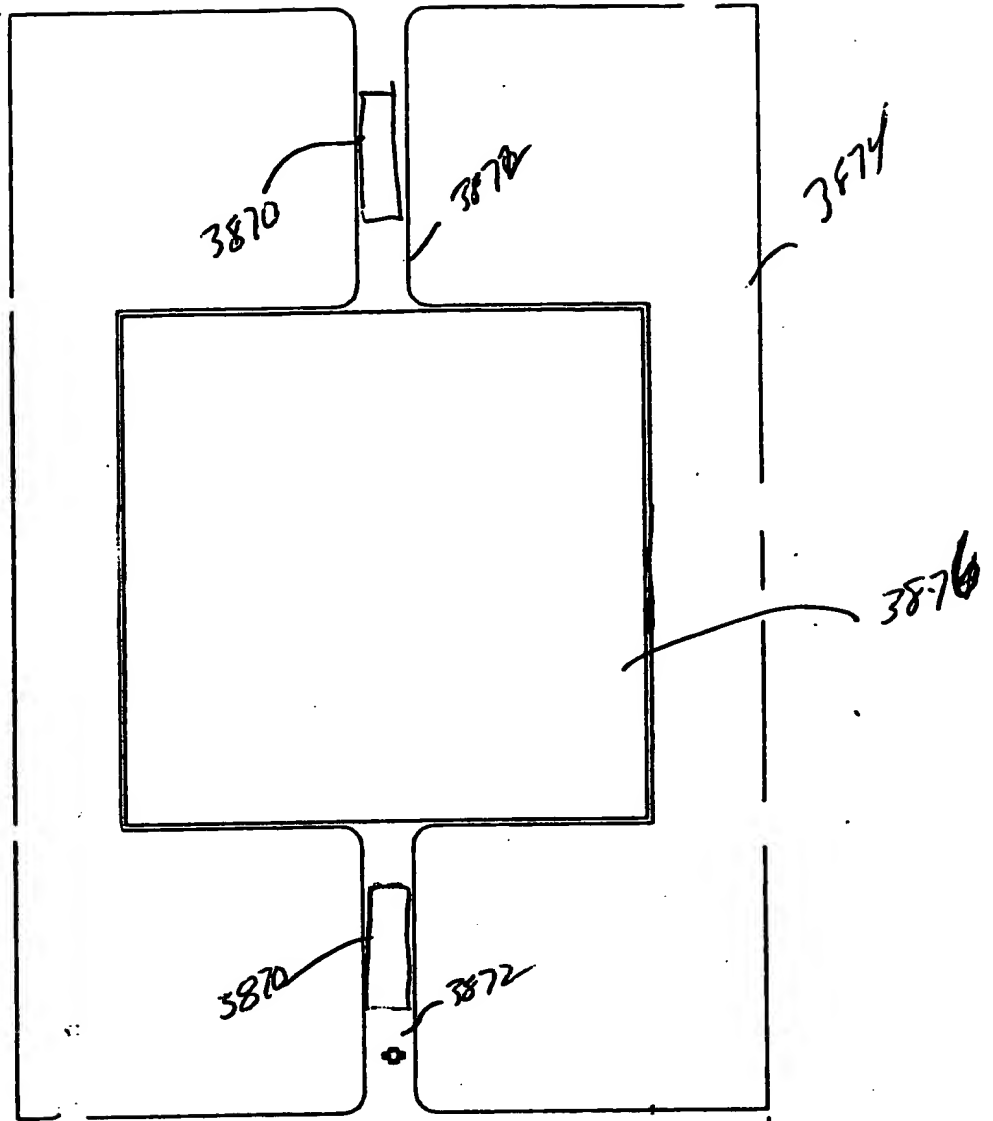


FIG 38 B

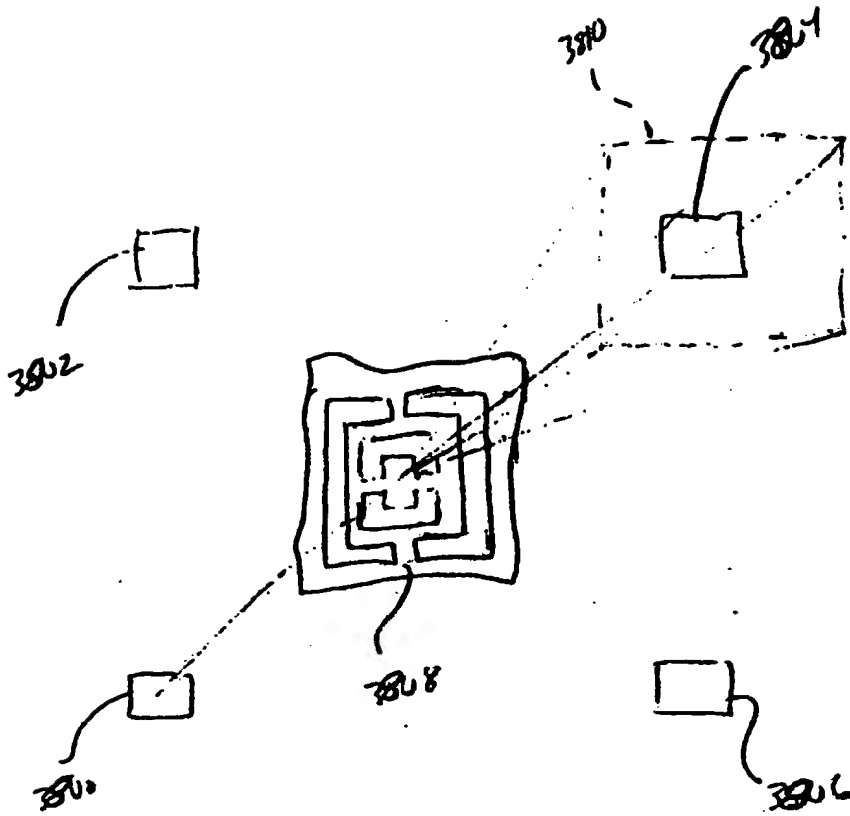
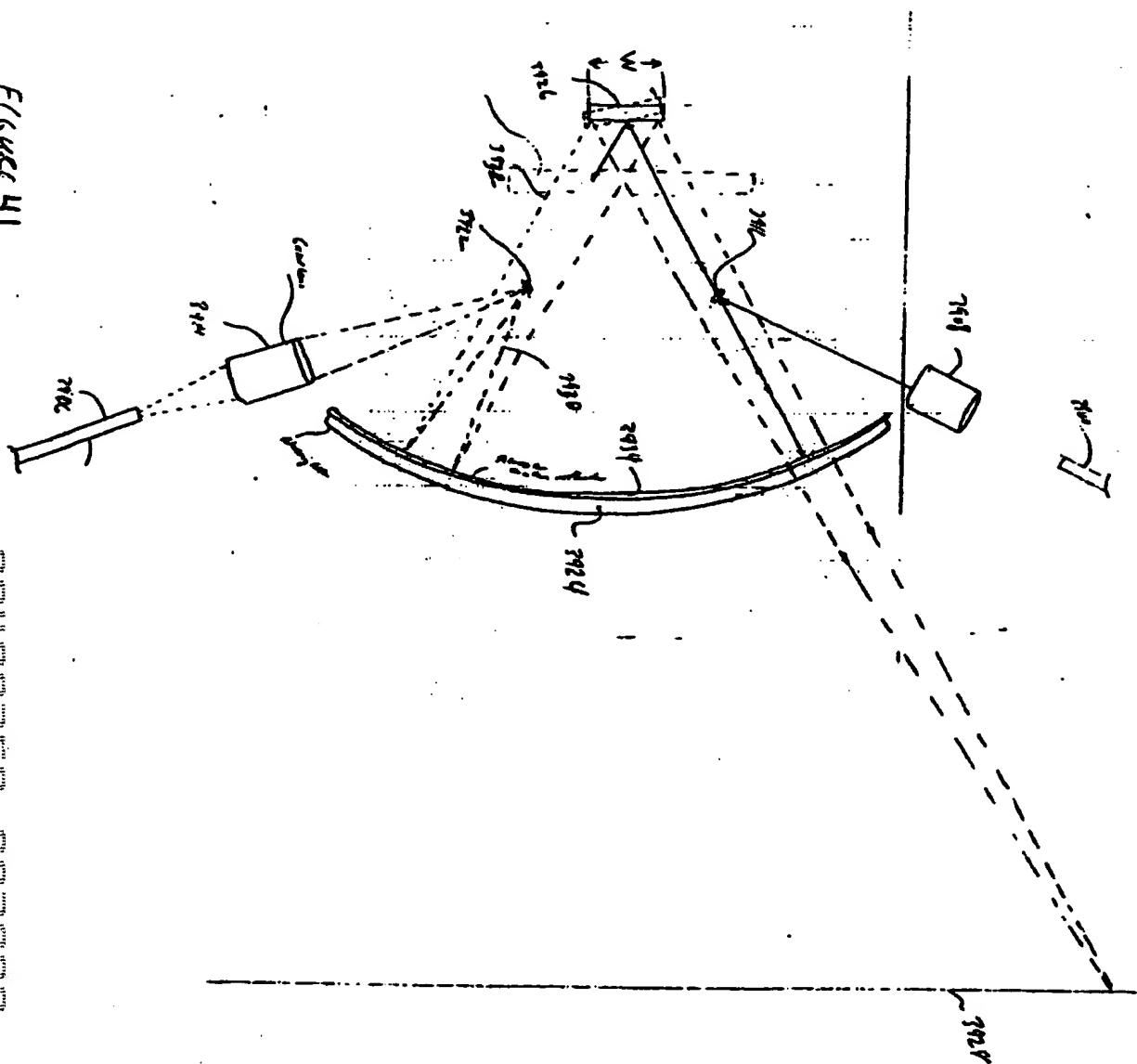


FIG 39

[illegible]

Figure 40

FIGURE 41



09400350-092099

660260-05E00460

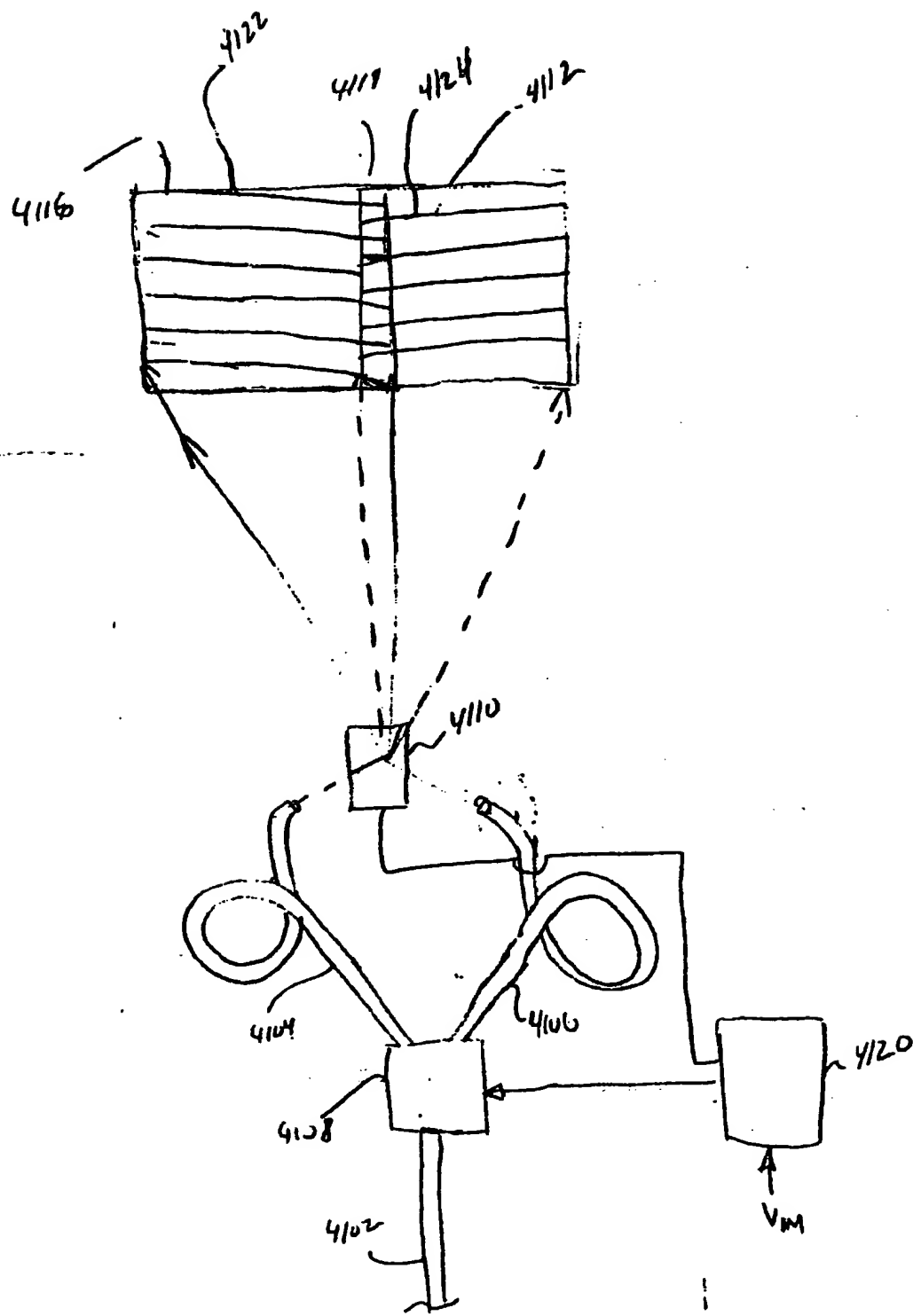


FIG 42

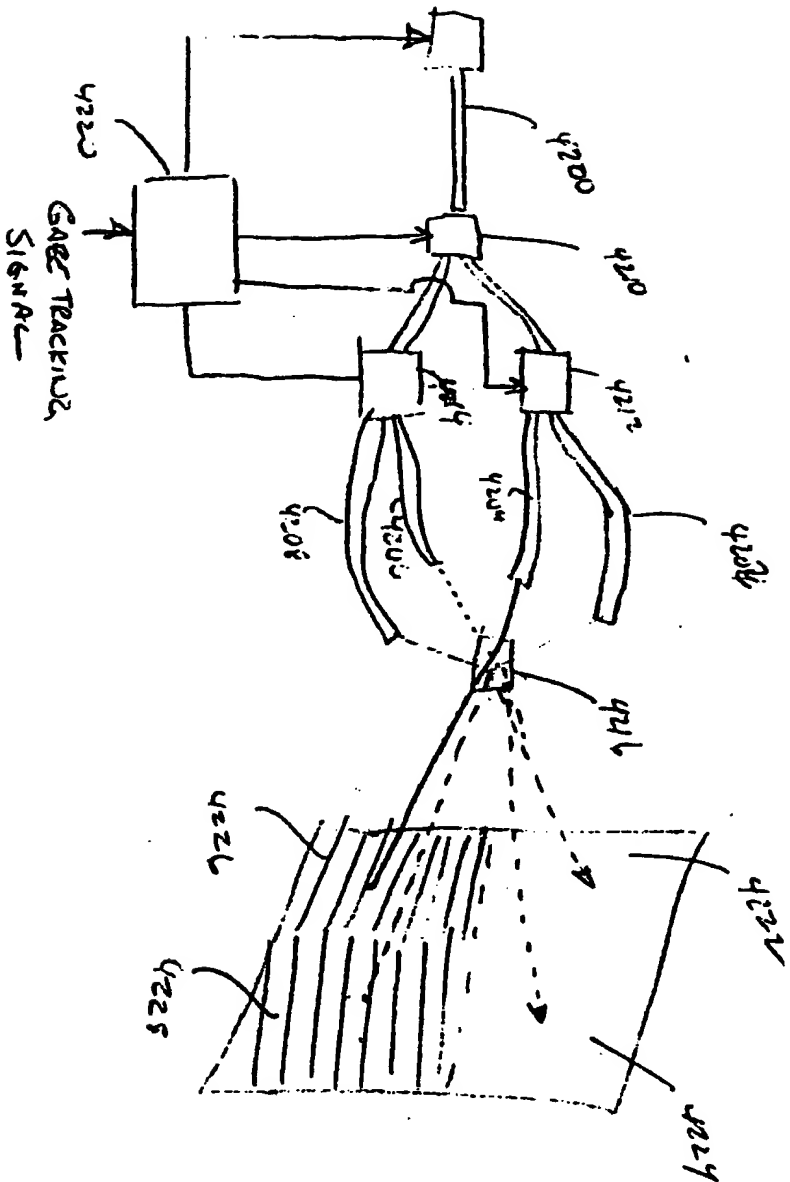


FIG 43

00400350 002000



660260-05E00460

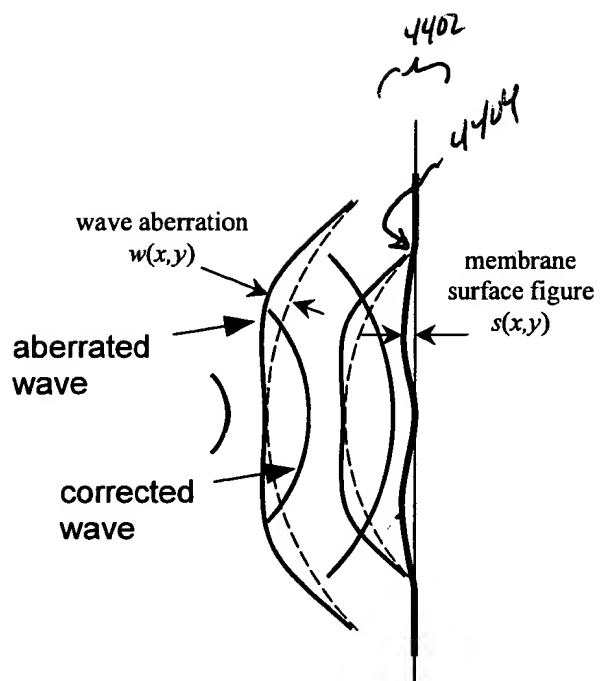


Figure 44. Wave aberration corrected by reflection from a membrane with surface shape figure  $s(x,y)$ .

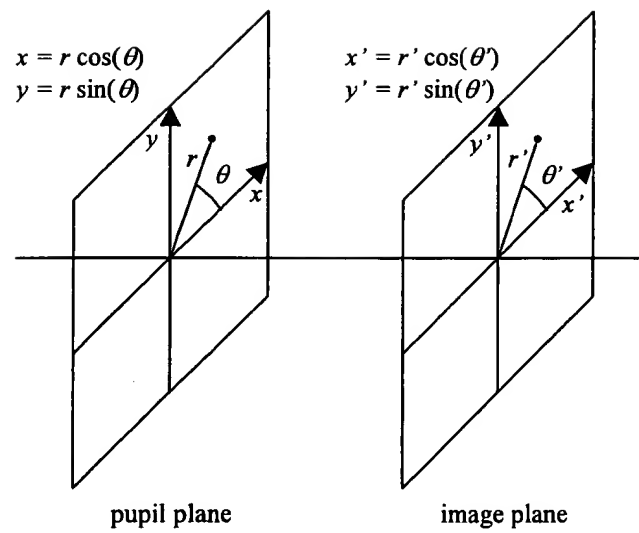
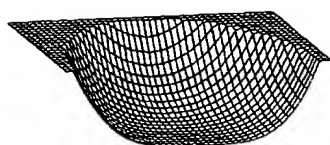


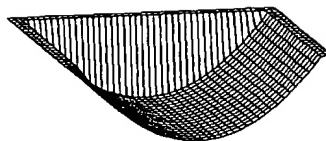
Figure 45. Coordinates for the pupil plane and image plane.



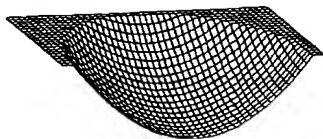
Spherical



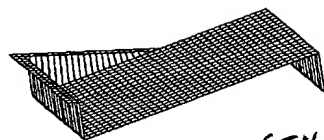
Coma



Astigmatism



Defocus and Field  
Curvature



Distortion (Tilt)

Figure 4.6 Primary aberration surfaces.

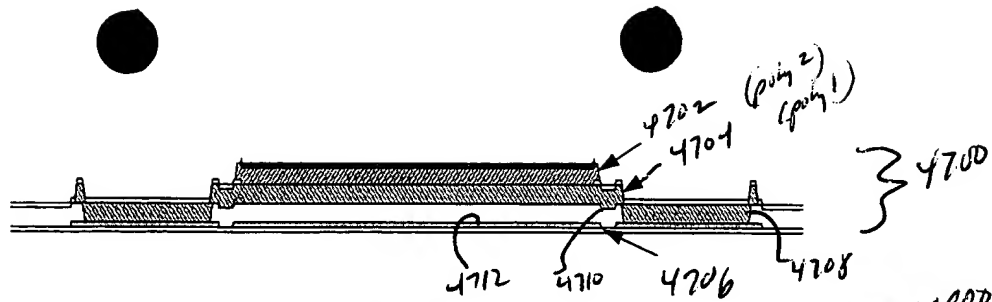


Figure 47. Cross-section View of ACM devices.

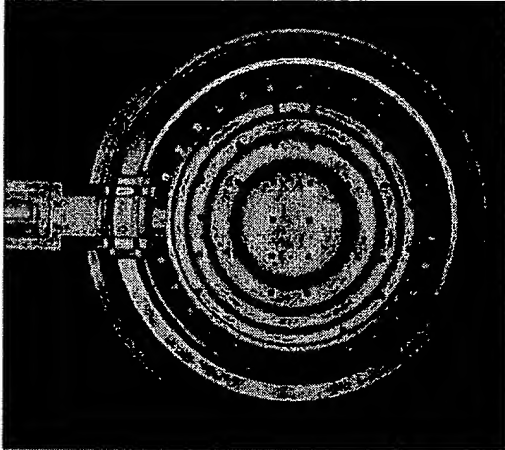


Figure 48 Circular ACM 200  $\mu\text{m}$  in diameter with 25% duty width support ring. Gold coating is intact.

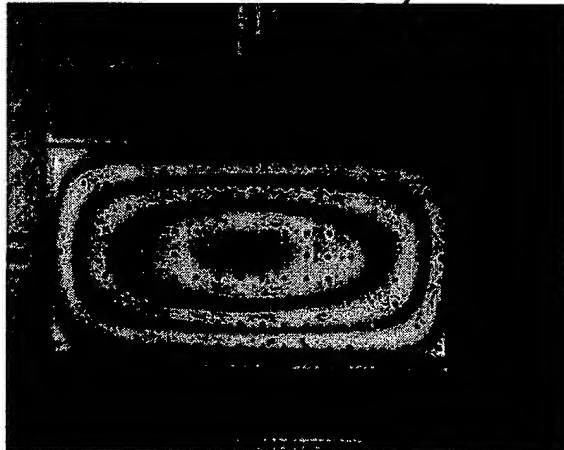


Figure 49 Rectangular ACM 250  $\mu\text{m}$  long by 500  $\mu\text{m}$  wide, supported along long sides and free along short sides. Gold coating is intact.

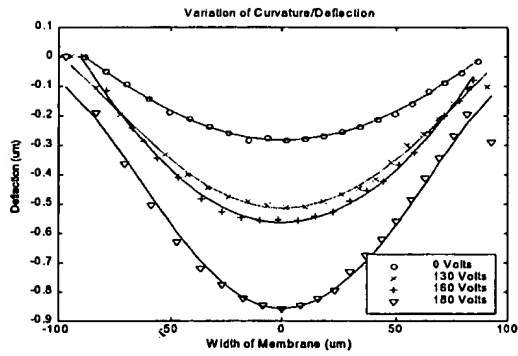


Figure 50a. 200 micron Circular Mirror with Gold, and 100% support ring.

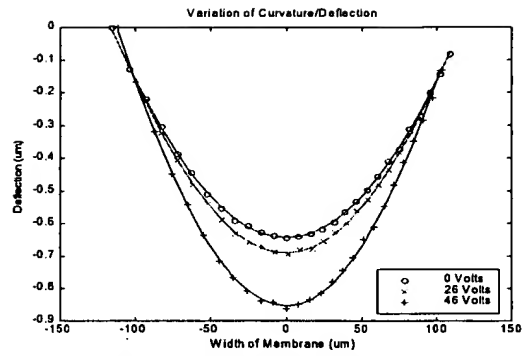


Figure 50b. 500 micron Rectangular Mirror with Gold, and 100% support strip.

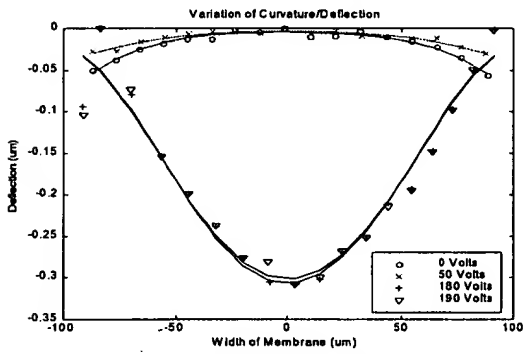


Figure 50c. 200 micron Circular Mirror with no Gold, and 100% support ring.

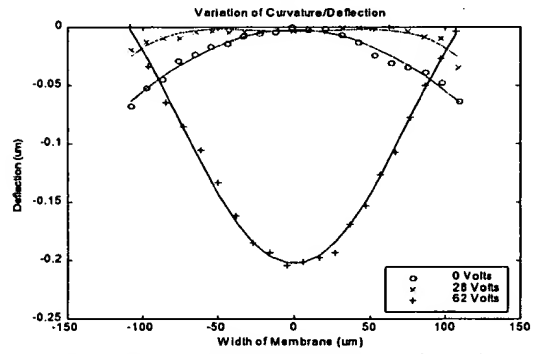


Figure 50d. 500 micron Rectangular Mirror with no Gold, and 100% support strip.

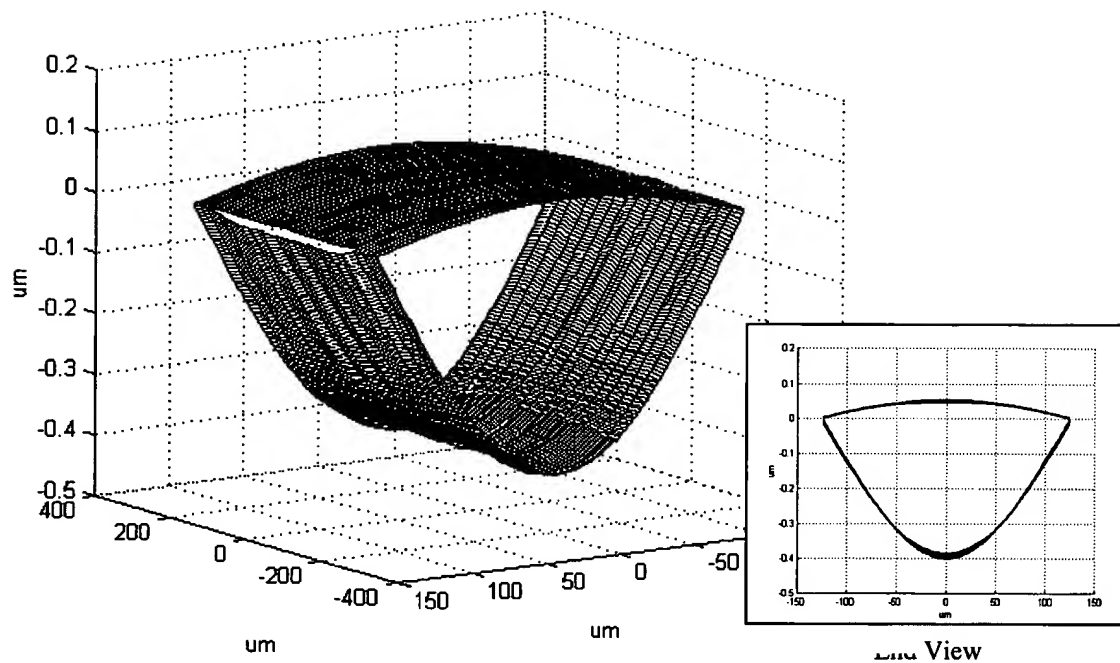
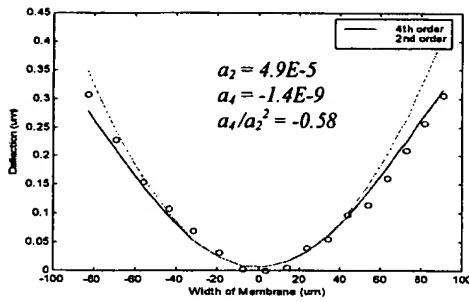
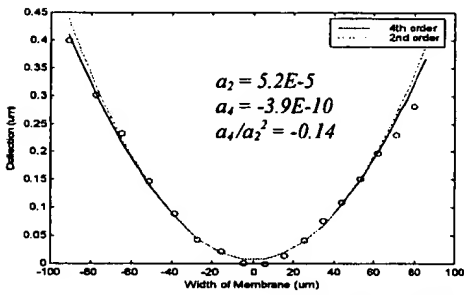
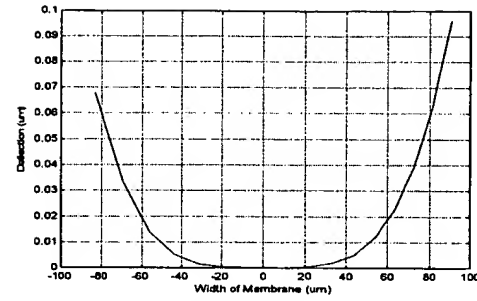


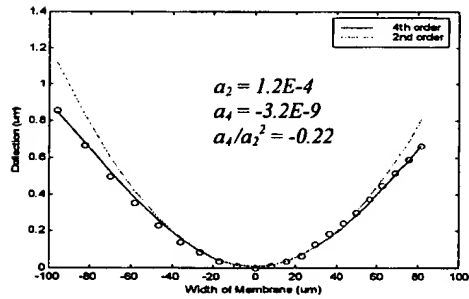
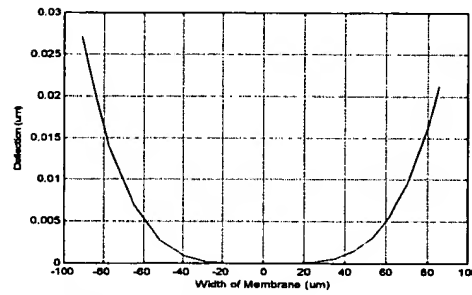
Figure 51 Surface plot of fabricated polysilicon (no gold) ACM for astigmatism compensation. Surface figure computed from interferometric microscope images.



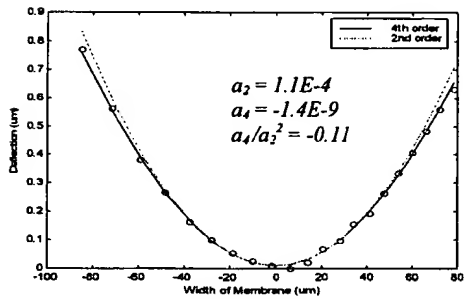
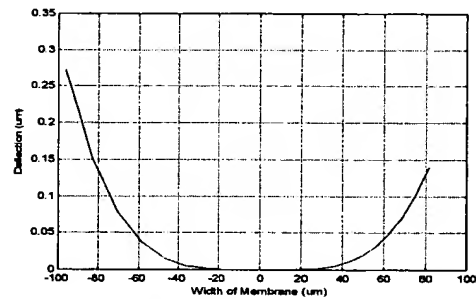
200 micron Circular Mirror with no Gold, and 100% support



200 micron Circular Mirror with no Gold, and 10% support



200 micron Circular Mirror with Gold, and 100% support



200 micron Circular Mirror with Gold, and 10% support

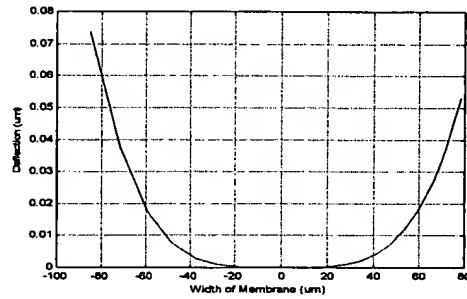


Figure 62. Effects of edge support stiffness and the presence of Gold on spherical aberration for 200  $\mu$ m diameter membranes. Curves correspond to near-maximum deflections for each device.

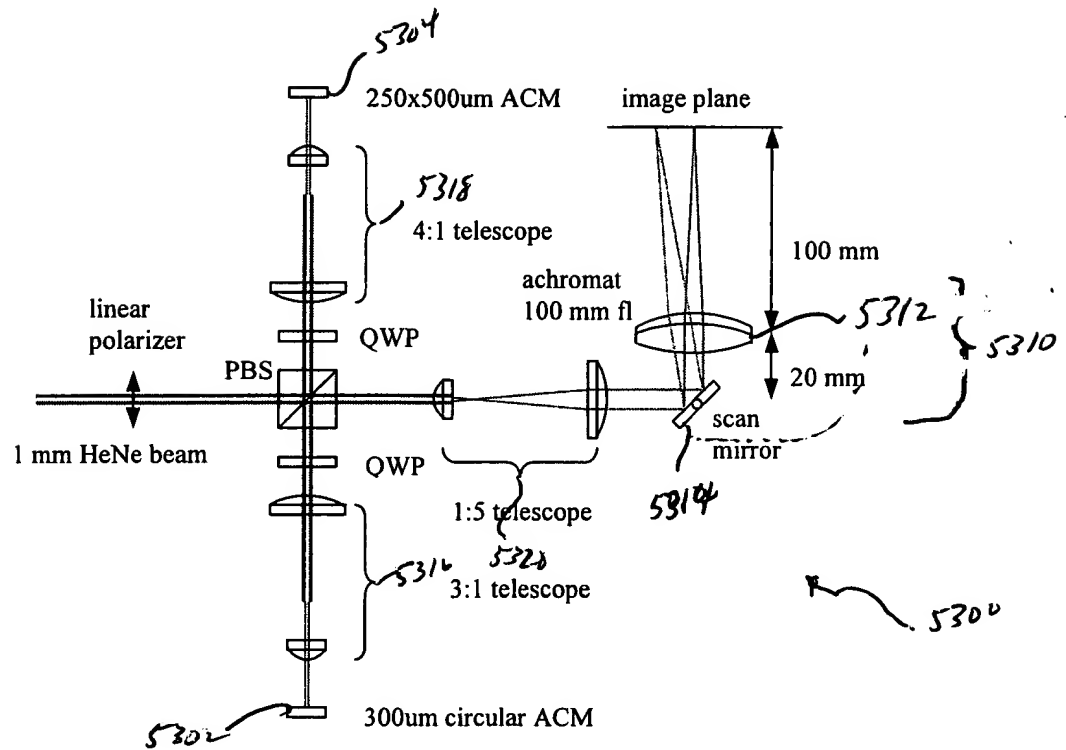


Figure 53. Laser beam scanner with ACM devices for astigmatism and field curvature correction.



[illegible]